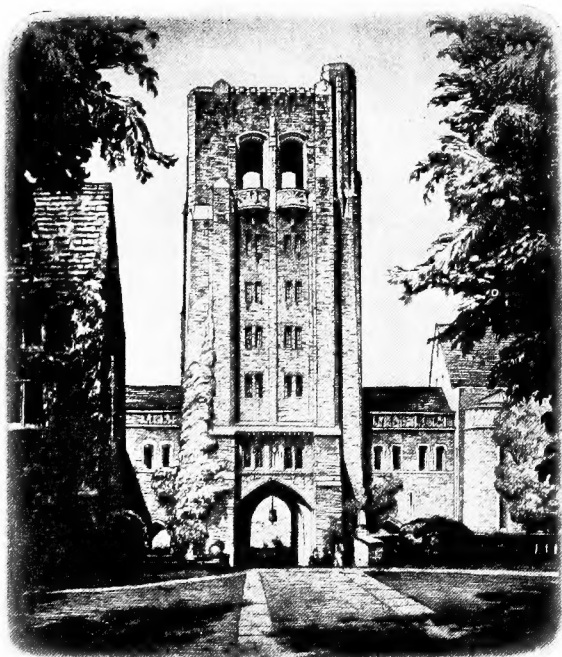




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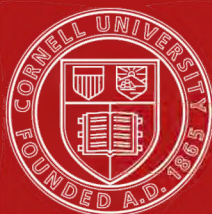
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PAPERS

READ BEFORE THE

MEDICO-LEGAL SOCIETY

OF NEW YORK,

FROM ITS ORGANIZATION,

SECOND SERIES.

REVISED EDITION.



NEW YORK :
W. F. VANDEN HOUTEN.

1882.

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PREFACE.

THE first series of the papers read before the Medico-Legal Society were published in November, 1874, under the plan which was submitted by the Publication Committee to the Executive Committee, and approved by the latter in January, 1873.

The papers comprising the present volume were collected and prepared at that time and submitted to the Executive Committee of the Society and approved by that Committee, and the second volume was announced as shortly forthcoming by Mr. Clark Bell, then the President of the Society, in his third Inaugural Address.

A change in publishers being deemed advisable, some delays occurred in its issue as announced.

On the re-election of Mr. Clark Bell to the Presidency, in 1882, he recommended in his fourth Inaugural Address, that "the Society instruct the Committee who prepared the papers for volume second, to proceed at once with its publication, and to take the necessary steps to provide for the publication of the succeeding volumes of the series."

The Society approved of these recommendations, and this volume appears under such action, to be followed by volume three, which will be shortly ready for publication.

The death of Dr. Stephen Rogers, late the President of the Society, and formerly a member of the Publication Committee, has led to the insertion of his portrait in the present volume, and it has been also deemed advisable to include some other portraits of officers of the Society and authors of papers read before it.

NEW YORK, *August*, 1882.

R. S. GUERNSEY, *Chairman,*

CLARK BELL,

WM. A. HAMMOND.

Publication Committee.

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Stephen Rogers

INAUGURAL ADDRESS*

ON ASSUMING THE PRESIDENCY OF THE NEW YORK MEDICO-LEGAL SOCIETY.

BY STEPHEN ROGERS, M. D.

THE New York Medico-Legal Society having selected me to preside over its meetings, and, as executive officer, to watch its interests during the coming year, I take this occasion to return my thanks for the honor thus conferred; and, if its acquaintance with me renders a further guarantee requisite, to here assure the Society that, whatever my best intentions, aided by the little capacity and industry I may possess, can accomplish for it, may be relied upon. Judging from that which has passed, and in view of this liberal reward for the few and feeble efforts I have heretofore made in its behalf, I am encouraged to expect that whatever I may be called upon to do in the future will be regarded as well intended, and received with the accustomed benevolence of the Society.

In assuming the obligations thus thrown upon me, it is meet, as well as in accordance with the acceptable custom of many of our oldest, most influential, and most numerous societies, that I commence by laying before this Society a chart indicating what I may regard as some of its most conspicuous objects and duties, as well as the routes it is to follow in its future fields of investigation and inquiry. Though almost the youngest of the incorporated societies in this metropolis, it is believed the facts will sustain the declaration that, while a few very much older ones count more numbers, our infant has grown to well nigh adult strength, and already ranks high

* Delivered Nov. 1871.

among them as regards its public influence and scientific importance.

The pioneer in this department, it has been followed by a society of the same name in the alleged metropolitan city of the civilized world, and now enjoys the regard and deference of the Paris Medico-Legal Society due from a child toward the parent. *Apròpos*, I may add that it behooves the parent in this instance to be on the alert, or the child will outstrip it in the race for usefulness and fame.

The first unostentatious meetings of the New York Medico-Legal Society were held so recently as in 1866. Its first constitution bears that date, and announces, among the first of its declarations, that the objects of the Society are, "*the advancement of the science of medical jurisprudence.*"

Although it was not my pleasure and honor to be associated with the founders of the Society, I have, from subsequent knowledge of its workings, learned that their motives in organizing it would perhaps have been more completely expressed, had they declared the objects of the Society to be *the advancement of the art and the science of medical jurisprudence.*

I venture the assertion of the belief that those veterans will all agree that, while they sought to cultivate a more general acquaintance with the great principal truths which might become involved in medico-legal inquiries, and to define the relations of these truths to the established laws of jurisprudence, they also recognized the importance, and even the necessity, of cultivating the art of presenting such truths to courts and juries in an effective way. This was the artistic part of the objects sought.

If I am not in error, therefore, a prominent end they had in view was to utilize material for the instruction and the preparation of physicians for medical experts. Very justly considering it of great importance that lawyers, engaged in cases which demand medical expert evidence, be acquainted with at least some of the chief principles of medicine involved in the inquiries, they sought the fellowship, society, and aid of legal

gentlemen—an element which, I need not say, has done the Society great credit, enhanced its usefulness, and demonstrated the wisdom of its originators.

The mutual education of lawyers and doctors, in subjects liable to become matters of judicial inquiry, and the art of presenting, or making that education available for the practical purposes of those investigations, and thereby secure a proficient body of medico-legal jurists, was, in short, the grand objects in the foundation of this Society.

I refrain from commenting upon the progress which may have been made toward the realization of those objects; but I will venture to remark that there is still a vast field for labor before us.

A just idea of the consummation of this Society then sought, and still wishes, is expressed by one of its distinguished members: "The immense erudition required to make a skilled witness in medicine, who is to occupy so responsible a position before courts of justice, makes it indispensably necessary for him to possess the greatest measure of proficiency in those matters about which he is called to testify."*

Proficiency is, beyond a question, the key to the secret of all lasting success of medical experts as witnesses. Doctors, it is said, will disagree, and, unfortunately, it is too often seen in courts of justice. By some, this occurrence is attributed to "a want of precision and candor in putting questions."† But it is feared that this want is too often manufactured by the witness himself, as an excuse for a reply suited to a fixed purpose.

A truly proficient and honestly scientific medical expert will rarely, very rarely, be entrapped into answers which conflict with truth, however adroitly the questions be framed. If, therefore, this Society succeed in sufficiently raising the standard of education in the medical experts, whether they testify for the one side or the other, it will have done very much to remove this opprobrium. It is manifest, however, that the first step toward reform will be to establish the al-

* Ordranax, *Jurisprudence of Medicine*.

† Op.

ways safe, and, in the end, the most politic rule, to first learn the subject before attempting to utter an expert opinion upon it. Two doctors will rarely agree in their testimony upon a scientific matter which neither understands, and the same discrepancy is very liable to occur when one witness does, and the other does not, understand the subject. Our colleagues, the lawyers, are not unfrequently, however, the innocent or intended cause of confusion in the answers of medical witnesses. I have repeatedly listened to questions on medical subjects from lawyers, so totally pointless, and so regardless of the best established truths in physiology, surgery, or therapeutics, as to defy comprehension. An attempt to answer such questions must necessarily lead to confusion and disagreement.

No careful medical witness likes to attempt to answer a question whose import is not fully comprehended by the lawyer putting it. I call upon such as may have had an experience in the matter, to say if I am not correct in stating that the questions of lawyers, who have taken the trouble to inform themselves in the scientific principles involved in those questions, are much more correctly put and more readily and promptly answered? No more need be said of the part our lawyer members occupy in our programme. A word to the wise is sufficient.

We have, with much advantage in time past, and we may no doubt do so in the future, resort to the instruction and discipline which moot-courts furnish as a means of cultivating knowledge and securing proficiency in our members of both professions. I assume the responsibility of speaking for the Society, and announce that we do not intend to neglect any means which may tend to advance that proficiency.

From the very character of its composition the Society has, from an early period in its existence, been regarded as an appropriate tribunal for the decision of questions involving a knowledge of subjects pertaining to medicine, to law, and court rulings. Several such questions have already been referred to it, and they will, in all probability, frequently be

received hereafter, if we are careful to maintain, by the means just suggested, the character the Society has hitherto borne and should enjoy. In order, however, not to disappoint the reasonable expectations of the public, the Society must be diligent. It must be kept under continual friction, so that the reflection from its polished shield may be seen from afar, and may serve as a beacon to the inquirer after medico-legal learning; and, if I rightly comprehend the scope of its functions, to lead the public to a source of education in some of the grandest subjects now engaging the serious thoughts of the civilized world.

By way of preparing the Society for the labor it has in prospect, if it intend to meet these expectations, it has appeared to me proper on this occasion to allude to some subjects likely, sooner or later, to be brought before it for discussion. It may be well for us, however, to understand at once that, while we, as a Society, are discussing and informing ourselves in the facts and the principles of these subjects, the community remains unenlightened, and that, as a consequence, when we are prepared to indorse a doctrine, the public is not prepared. But, as such preparation is simply the fruit of education, we should not despair when we see apparent perversity arrayed against our recommendations, but should forthwith proceed to educate the people by all available means.

Among the first of these important subjects which may engage our attention will, perhaps, be that of the obligations of society to itself in the disposition to be made of such persons as have, on the plea of insanity, escaped the punishment prescribed by the law for the gravest of all crimes. Indeed, most of the members are aware that measures have already been inaugurated to bring this important matter before us for discussion, with the view of not only educating ourselves and the public upon it, but through this Society to influence and to secure any required legislation.

It will devolve upon this Society to exhibit to the public, and to show to our legislators, the fact, that while there is,

under existing laws, as well as in the sentiment of mankind, all the authority and the support needed for the protection of the community against such monsters of insane ferocity as Buffum, who unprovokedly murdered the highly-esteemed citizen of Newburg while at tea with his family, the world is still in lamentable need of some more stringent and definite law touching the disposition of such criminals as Cole, and many similar ones who might be mentioned. Homicidal insanity, under circumstances of provocation, is one of the great crimino-social problems of the day, and one which this Society must investigate, and make such suggestions about as will lead our law-givers to place it where it belongs in the list of crimes, and under such restraint as the case demands. Shall uncurbed passion and nurtured anger be permitted, in the same person, to repeatedly inflict their savage and even fatal manifestations upon society, is the question toward whose solution our efforts must be directed. Influenced by the instruction and guidance, to which we may contribute much, let us hope that public sentiment may ultimately reply to this question in such a manner as shall result in the greater security of the many, though it may at first seem severe upon the few.

Next in order, certainly in importance, if not in course, we may well devote our attention to that vast subject which has already engaged this Society, namely, the intellectual status of the methomaniac, and the duty of the public toward him. Should we arrive at the conclusion that appropriate, though in many cases extreme punishment, is an efficient means of protecting the community against the criminal outrages of those victims to the so-called *morbid impulses*, from homicidal epileptics and hypochondriacs, and from other forms of uncontrollable impulse to evil, it is difficult to see how we can consistently evade the application of the same principle to the control and correction of this morbid and really uncontrollable impulse to be drunk—an impulse, we all know, which results in more evil to society, and finally in more destruction to life, a hundredfold, than all the higher grades of crime

We must sound this enormous abyss of morbid uncontrollable impulse to crime, whatever the degree of the crime may be. We must carefully analyze these impulses, so as, if possible, to determine if there be any difference, except in the degree of the immediate crime, between the morbid uncontrollable impulse to murder, to steal, or to become intoxicated. We will, no doubt, find that these impulses just mentioned are all bad; that they are all subversive of the well-being of the individual who is the victim of them; that they are all destructive of family security, and that they are all dangerous to society. If, therefore, there be any valid reasons why discreetly-administered punishment should exert a salutary control over one or more of these impulses, and not over them all, it will be our duty to duly consider such reasons; but, if it be true, in any one of them, that the simple understanding that crime committed under the impulse will surely be punished, the subjects of those morbid impulses will be the better able to control them, and we must insist upon knowing why the rule is not of general applicability.

Cause must be shown why the principle is not as applicable to the morbid impulse to periodic or continuous drunkenness as it is to a like impulse to suicide or homicide. Assuredly few morbid impulses are more completely beyond the control of reason than are those to alcoholic and other forms of intoxication. Against them, all considerations of parental obligations are impotent; all ties of family and affection are powerless to restrain; every motive of self and social respect, and regard for pecuniary and business interests, disappears before the imperious demands of this ruling and vicious impulse. Many historical examples might be adduced to illustrate the assertion that, in some instances, no motive on earth, nor any prospect of bliss or torment hereafter, was of itself sufficient to influence the helpless victim of this terrible impulse to social disgrace, family ruin, and self-destruction. It therefore seems to me that, if this Society indorse the doctrine that *uncontrolled morbid impulses* which jeopard the rights, interests, and the lives of citizens,

and tend to burden the State, must be controlled, and their consequences punished by the State, it will hardly be able to make the uncontrolled impulse to intoxication, in all forms, an exception. I may appear to dwell unduly upon this theme, but in self-defence you will allow me to say that I regard it as one of very great importance, while I know it is one upon which both this Society and the public need more instruction than upon almost any other. Whatever may be public sentiment with reference to the management of the impulsive homicide, it is not yet ready to admit that uncontrollable impulse to intoxication should be treated as an insanity. Should this Society succeed in convincing its members that such is the true treatment, it will still have much to do in bringing the public to the same belief. I will here mention that the idea has often occurred to me that no testimony will be so likely to carry conviction that this is the correct view to take of uncontrolled drunkenness, as that furnished by the victims of the impulse themselves. They are the ones who appreciate the power of this impulse, and are, therefore, the proper persons, when they, or even their example, can be made available to enlighten society in the matter. Though great difficulties may be met with in the way of placing morbid impulses to intoxication in their true and exact light before the public, we shall find that the ground is by no means untrodden. The asylums for inebriates, and the lunatic asylums that have assumed the care of inebriates, have accumulated a fund of evidence which, if utilized, would be of inestimable value to the world.

It may be the fortunate mission of the Medico-Legal Society to bring out of this evidence the fact that the experience of these institutions goes to prove the ungovernable impulse to become intoxicated as much a disease as impulse to homicide, or theft, or arson, or suicide, and that it is to be treated in the same manner. I will venture to add that, if they have ever found any of these impulses held in subjection by actual or threatened punishment, that to drunkenness has been one thus controlled. It will, finally, devolve upon us to show that

the State may, with great advantage, take more effective measures for the control, reform, and even punishment, of the morbid impulse to drunkenness than it has ever yet done.

I would suggest still another department of mental research as one whose singular importance, as well as the comparative popular and even professional ignorance relating to it, renders it eminently worthy the deliberate attention of this Society. I allude to the subject of the moral and criminal responsibility of the totally uneducated deaf-mute. This interesting question has recently been brought before the public in the case of a deaf-mute who, in one of the neighboring counties, committed the murder of his employer, and under circumstances to make it particularly savage. I should add that, on account of the interest attaching to this subject, steps have already been taken for its thorough presentation to the Society, whenever it may be acceptable, by one who, from a life-long experience, has become eminently competent to do so in the most attractive manner.

It would not be surprising to see the discussion, its introduction may give rise to, wander into the domain of the criminal responsibility of too many savages in our midst, who have not received the taming influence of the slightest education, either secular or religious.

It has also occurred to my mind that it would not be a fruitless theme for this society to thoroughly investigate and to promulgate the results of such investigation of the medico-legal evidence of death by starvation and neglect as applicable to infants more especially, though not to the exclusion of any age. This subject has, from time to time, been thrown into much prominence, both here and abroad, coming usually through announcements of boards of health, or through the verdicts of coroners' juries, and it appears to be one worthy of our attention.

By this thought I am led to the utterance of the idea that the relations of society and of science to coroners' inquests might furnish another subject for, possibly, valuable labor on the part of the Medico-Legal Society. It is supposed by

many that crime would not be more frequent had we no such an institution as a coroner. By others it is believed that about as much would be known of the causes of sudden and violent death were there no such thing as inquests. By still another and more radical party it is declared that, if the whole establishment of the coroner were abolished, the community would be rid of an intolerable nuisance. But, with all warrantable generosity, I may be allowed to suggest that there are reasonable grounds for believing that this department of our government may be improved. Has this Society any suggestions looking to such improvement?

The fact that there is, and always has been, a most unpleasant conflict of opinion between medical experts and the courts of so-called justice, relative to the mental condition of persons confined or about to be confined in asylums, is well known to most lawyers and physicians. It has occurred to my mind that the Medico-Legal Society of New York might advantageously devote some of its time and thought to devising a plan by which all of this class of cases may be referred not only to an impartial, but to a thoroughly competent tribunal, thus securing strict justice to all concerned, and protecting the community.*

It has been suggested to me, by one of our distinguished members, that the subject of the value of voluntary or forced

* Since this address was delivered, I have been much pleased to learn that Dr. R. L. Parsons, of the New York City Lunatic Asylum, has advocated a measure well calculated to provide for the necessity above alluded to. I take pleasure in referring those, who may feel an interest in the subject, to Dr. Parsons' paper in support of his suggestion, published in *THE JOURNAL OF PSYCHOLOGICAL MEDICINE* for April, 1870, p 336. It will there be seen that before the lunatic, who had been discharged by the judge in due process of the law applicable to the case, left the court-room, he "commenced an irrelevant" and insane harangue to the very justice who, a moment before, had said, "If this man could be held, under the evidence, in a lunatic asylum, then a large portion of the citizens of this city should be there also." Three days after, the person whom the judge and several medical witnesses regarded as sane was recommitted to the asylum as insane and dangerous.

confession, of having been the perpetrator or having participated in the perpetration of a notorious crime, would be an interesting and useful one for us to place upon the records of our transactions, for the future use of science and society. If it so appear to you, early occasion will be taken to present the subject to you.

And, finally, I would suggest that one of the great fields for the labors of the Society lies in the direction of legally and definitely fixing the requirements of those who may presume to consider themselves skilled in human medicine and surgery. With rare exceptions, this subject has, in all countries, and amid all degrees of civilization, occupied quite an anomalous position. In nearly everything else, mankind regard a preparation, by study and practice, necessary to safety and success, and will therefore take especial care to investigate one's claims to confidence, but in medicine these precautions are continually neglected. In all else they will respect the opinions of competent judges, and in the matter of their diseases and their treatment they are extremely liable to insist that they have quite as good a right to an opinion as any one else, and to proceed to the practice of that opinion, though they are totally ignorant of even the rudiments of the knowledge on which any right to an opinion could be founded.

And this leads me to suggest that there is another subject allied to this, which has as great claims upon the efforts of this Society as, possibly greater than, any hitherto mentioned, viz : the relations of the advertising columns of the daily, and other papers, to a large part of the so-called social crime in the community. Is there any responsibility resting on the former, for the production and frightful prevalence of the latter? I distinguish the advertising columns because of the well-known and remarkable circumstances that, while in the other columns we continually meet with accounts of the most terrible crimes against humanity, commented upon in a very sermonizing and highly moral way, if we turn to the adver-

tisements of the very same paper, we will find published the most adroit and wicked information as to the place, means and manner of committing the identical crime. Can the public regard him, who gives the publicity to an announcement that the means of committing a crime may be obtained at certain specified localities, as other than an abettor of the crime? Have we reason to rank that antiquated enemy of all mankind, late of Chatham Street, but now awaiting his trial for so-called social crime, as more criminal than the newspapers which published his seductive advertisement? Is there a real distinction in the degrees of the criminality and responsibility of the sinner who kept the house, and the one who advertised it? Is he, who pastes quack and illicit advertisements on curb-stones and on lamp-posts, more disreputable or more criminal than he who publishes them by the thousand from iron palaces?

At what point does the liberty of the press, with its benefits to society, become a public pestilence, an abettor of the most heinous social crimes, and the enemy of humanity?

These are questions this Society may well spend some time in answering.

I imagine that I hear the exclamation, why add more to this already overwhelming amount of material for this Society to work upon? I admit the fact that much, and more than enough, has been suggested; but, it must be obvious, to all who reflect, that the subjects I have mentioned are but a part of all that will probably come before us. Whether we, as a Society, become famous, or sink into insignificance, will depend upon the zeal, intelligence, and perseverance, with which we engage in the work of settling these and other questions which may be presented. There is no reason to hope that our road will be unobstructed. We must be prepared to meet shocking disappointments and disheartening opposition, not to say any thing of impenetrable ignorance. We are beginners, and are yet small, but let us keep our standard high, our ambition noble, if not great. Let our motto be that so

appropriately and beautifully given by the poet, in nearly the following words :

“The lives of great ones all remind us
We may make this one sublime,
And, departing, leave behind us
Foot-prints on the sands of time.
Let us then be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait.”

REPORT ON CRIMINAL ABORTION.*

A few words are deemed necessary to explain the origin of the following report.

Soon after the startling disclosures in connection with the "professional" abortionists, Wolff and Lookup, the New York Academy of Medicine met on the 18th of May, 1871, and unanimously passed the following resolutions :

"Whereas, The pervading crime of abortion as a regularly advertised business has, in this city and county, been hitherto opposed by the medical profession without the uniform and efficient co-operation of the State officers and the courts which has been desired and reasonably expected.

"Resolved, That the profession hail the advent of any administration which will secure it such long-desired support as shall enable it to successfully contend against this widespread crime, practised in too many instances, by malefactors possessing, or pretending to possess, medical diplomas.

"Resolved, That Judge Gunning S. Bedford, by his manner of conducting the trials of those notorious abortionists and enemies of mankind, Wolff and Thomas Lookup ; by the high moral tone of his addresses to, and by his clear and specific instructions given to the juries ; and finally, by his prompt and just sentences, eminently honored the name he bears, has done infinite service to society, has merited the commendation and shall have the most cordial approval of the New York Academy of Medicine, as he doubtless will of every member of the profession who properly estimates his duty and morality."

* Made to the Society, December 14, 1871.

The sentiments thus expressed were loudly echoed in various parts of the country. Among other influential medical associations, the Medical Society of the County of Berks, Pa., passed a series of resolutions similar to the above, and dispatched a letter to Judge Bedford highly commendatory of his ‘earnest and decided efforts to arrest the unnatural crime of abortion . . . now assuming such fearful proportions in our land.’”

Society had scarcely recovered from the shock inflicted upon it by the two criminals above named, when it was again thrown into a state of alarm by the discovery of the fearful “trunk mystery!” In the midst of the excitement occasioned by this shocking outrage, the New York Academy of Medicine met again on the 21st of September, 1871, and adopted a set of resolutions giving expression to its warm appreciation of Judge Bedford’s charge, then recently delivered to the grand jury, on the occasion of opening the Court of General Sessions, September 6th, and pledging “all its influence and its efforts in support of any legislative or other measures which our law officers may propose as offering a reasonable promise of mitigating, if not removing, the pestilence of criminal abortion which is upon our country.”

The charge of Judge Bedford, referred to in the preamble to these resolutions, was remarkable for its outspoken declaration of a pressing need for more stringent legislation on the subject of criminal abortion. Therein he apprises the community that the “authorities have resolved to strive with all their power to exterminate the traffickers in human life,” and expresses a hope that the next Legislature will so amend the part of the statute relating to the *denomination* of the crime, as to make it “murder in the first degree.”

The press took up the subject, and, in several able editorials, advocated the passage of a statutory enactment more stringent than the one now in force.

Encouraged by so general and unanimous an expression of opinion, the New York Medico-Legal Society espoused a cause so congenial to its well known aims, and seized the op-

portunity for which it had been waiting, to appoint a committee of legal and medical gentlemen, with power to consider the practical value of the existing statutes on criminal abortion, and to report thereon to the Society, together with whatever suggestions of amendment it might deem expedient. The result of the deliberations of this committee is presented in the following report, which was read and unanimously adopted at the Society's last meeting, held on the 14th inst., at the College of Physicians and Surgeons, in this city.

J. J. O'D.

NEW YORK, *December 22, 1871.*

Report of the committee appointed by the New York Medico-Legal Society, "to take into consideration the subject of the practical value of the existing statutes in this State relating to the prevention of criminal abortion, to report thereon to the Society, and to present such suggestions for further legislation on the subject as the committee may deem expedient."

The committee, appointed in pursuance of the above resolution, beg leave to submit the following report :

Two important influences, law and public opinion, deserve to be considered in relation to the practice of criminal abortion :

I. The history of public opinion on the subject conveys a forcible illustration of the evil results of erroneous teaching. Had popular views regarding the *fœtus* been the opposite of what they were, and even still are, it is not too much to say that millions of lives, some, maybe of priceless worth to society, would have been spared.

In ancient days, they who claimed to instruct the multitude in the theory and practice of morals not only looked leniently on foeticide, but, under certain circumstances, openly recommended it. Plato advocates it in a contingency mentioned in the "Republic" (lib. v.). Aristotle ("Polit.," lib. vii., c. 17) declared that no child should be allowed to be born alive whose mother was more than forty, or father over

fifty years old. Lysias ("Pleadings," quoted by Harpocration) maintained that forced abortion was not homicide, because a child *in utero* was not indued with a separate existence.

Such being the teachings of some of the great leaders of public opinion in ancient times, first, with respect to the question of the separate life of the *fœtus in utero*; secondly, on the interference that abortion, far from being a crime, was allowable, and in some cases commendable, it is not in the least surprising that it should have become a practice so prevalent in after-days as to merit the denunciations of Ovid ("Amoor.," lib. ii.), of Seneca ("Consol. ad Helv.," 16), and of Juvenal (*Satire* vi., 594).

The ancient laws indeed, more circumspect than a misguided public opinion, are said to have punished artificial abortion with great rigor (*Cicero pro Cluentio. Strobæus Serm.*, 73). But among the ancient peoples it was largely practised notwithstanding, under the unfortunate belief that the *fœtus*, not being alive *in utero* with a life of its own, had no special claims to humanity, and no rights which they were, morally, at least, bound to respect. The Romans carried this view to so outrageous an extreme as to hold that the *fœtus* was a mere excrescence of the mother, a simple appendage from which she could free herself as innocently as she might be rid of a troublesome disorder. Consequently, induced abortion became so common in Rome that the greedy quacks who flocked to her from all quarters could barely supply the demand for their services and nostrums. More particularly did the evil prevail, as in our own day and city, among the well-to-do—the so-called respectable classes. To this fact Juvenal bears ample testimony (*Satire* vi., 591–596). After paying a compliment to the exemplary patience with which the inferior class of matrons bore the pains of labor and the fatigues of nursing, he pours out the phials of his irony on the high-born and pampered dames of his day. "You'll scarce hear tell," he writes, "of a lying-in among ladies of quality ;

such is the power of art, such the force of medicines prepared by the midwife to cause barrenness and abortion."

"Sed jacet aurate vix ulla, puerpera lecto.
Tantum artes hujus, tantum medicamina possunt,
Quæ steriles facit, atque homines in ventre necandos
Conducit."

At length Christianity came, to measure swords with the growing evil. For a time the contest was warm. A society corrupted by ill-gotten wealth and sensual gratification would not surrender such convenient doctrine without a determined resistance. The battle waxed fierce, but the already assured triumph of the purifying faith was postponed by a compromise (how originated or by whom proposed does not appear) no less disastrous than the pagan theory it supplanted. By this compromise it was agreed to consider the *fœtus* as endowed with life only from the date of the maternal sensation called "*quicken*ing." Abortions forced after "*quicken*ing" were branded as serious crimes, but all so caused before this period were suffered to pass unnoticed. Henceforth "*quick*" became a word of evil omen. It is true the canon law subsequently disregarded this compromise, declared the *fœtus* alive from conception, and condemned its destruction at any period of *utero-gestation* as a great and wicked crime. The Christian Church, to its eternal honor be it said, has ever advocated and enforced the principle of the inviolability of foetal life.* But the mischief could not be undone. A doctrine, only a degree less heartless than its pagan predecessor, took a firm hold on society. How effectually it influences the opinion and practice of our own time, how completely it has permeated all, but more particularly the higher

* "Omnes, qui abortus seu fœtus immaturi, tam animati quam inanimati, formati vel informis, ejectionem procuraverint, penas propositus et inflictas tam divino, quam humano jure, ac tam per canonicas sanctiones et apostolicas constitutiones quam civilia jura adversus veros, homicidas incurrere, hæc nostra perpetuo valitura constitutione statuimus et ordinamus.—(*Reiffenstuell, Jus Canonicum Universum*, tome iii. Paris, 1854. Quoted from Storer's "Criminal Abortion," p. 38, note.)

rank of contemporary society, needs not to be insisted upon here.

Among those who are competent to pronounce on this question of "*quickenings*," there is, however, but one opinion, and to it your committee ask the undivided attention of the community: *The fetus is alive from conception, and all intentional killing of it is murder.* The world is free to discuss the transcendental problem concerning the stage of development at which the *fetus* becomes endowed with a soul. Some may believe, with Plato, that this event is deferred till birth. Others may hold, with Aristotle, that it occurs at the fortieth day for boys and the eightieth for girls! Only, let such opinions have their due place and weight. Whatever may be their value as evidences of intellectual activity, they have no bearing whatever on the great practical question of child-murder. If there were never such an existence as a soul, if men perished utterly when they died, laws against murder would still hold good, because laws against murder were enacted not for the soul's sake, but to preserve the peace and even the existence of society. Opinions such as these now indicated are harmless enough if jealously confined to the field of abstract speculation. It is only when suffered to influence conduct toward the *fetus* that they become delusive and pernicious errors. Too great, unfortunately, has been their power in this respect; hence the necessity of combating them and of exhibiting them to the public in their true light, as evils which have long waged war against the dearest interests of society. All such speculations cannot be too strictly excluded from the sphere of practical morals; and furthermore, the public should be taught that the significance attached to "*quickenings*" is unfounded, that the current deductions therefrom, already indicated, are utterly erroneous and immoral, and warned that the community, whose regard for foetal life is influenced by either, is courting a terrible retribution. Herein is ample work for the two great educators of a nation, its pulpit and its press.

Equally groundless is the opinion, inherited from pagan-

dom, that the *fœtus*, because dependent for existence on its connections with the mother, has not a separate life, and consequently may be willfully destroyed without incurring the guilt of murder. A moment's consideration will suffice to show the absurdity of this view. All human beings (confining ourselves for the sake of apt illustration to this genus) depend for life on the medium of their existence. Change this medium completely, and they must suddenly die. Now, what ought to be thought of a proposal to excuse murder on the ground that human adults are not indued with independent existences? Yet, monstrous though it would seem, it is the very apology offered, and among some accepted, for foeticide.

II. The point of chief interest, in a legal view of the subject under consideration, centres in the history of the word "*quick*."

Wharton informs us that, at common law, the destruction of an infant unborn, *if it had quickened*, was murder. (1 *Russell on Crimes*, 671; 3 *Coke's Inst.*, 50; 1 *Hawkins P. C.*, ch. 13, § 16; 1 *Hale P. C. H.*, 34; 1 *East P. C.*, 90; 3 *Chitty Crim. Law*, 798.)

The procuring an abortion on a woman, *after* "*quickening*," was a common law misdemeanor, although neither mother nor child perished. If it were procured upon the woman *before* "*quickening*," the offender could be convicted at common law of assault and battery upon the woman, although, if such abortion was procured with the consent of the woman *before the child had quickened*, it was not an indictable offence at common law, for the reason that *the child was not then supposed to be indued with life*. (*Commonwealth vs. Bangs*, 9 *Mass. R.*, 387.)

The statutory laws of New York laid equal stress on the term "*quick*," making it the basis of a distinction between the degrees of guilt of criminal abortion. Thus, the Revised Statutes first enacted, which took effect in 1830, provide that "the willful killing of an unborn *quick child* by any injury to the mother of such child, which would be murder if it resulted

in the death of such mother, shall be deemed manslaughter in the first degree." (2 Rev. Stat., 1st ed., p. 661, § 8.)

This section is still in force, never having been repealed.

SECTION 9 provides that "every person who shall administer to any woman, pregnant with a *quick child*, any medicine, drug, or substance whatever, or shall use or employ any instrument or other means, with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, or shall have been advised by two physicians to be necessary for such purpose, shall be deemed guilty of manslaughter in the second degree."

This last section was subsequently repealed by laws of 1845, ch. 260.

Without entering into details respecting the amendments to the statutes on this subject, it will be sufficient to say generally that from 1845 to the present day, section one of the statute against criminal abortion, defining the character and degree of the crime, has obtained the obnoxious term *quick*.

In 1869 the Legislature (2 Laws of 1869, chap. 631, p. 1,502) repealed section two of the act of 1845, and section one of the act of 1846, and enacted as follows :

SECTION 1. "Any person who shall administer to any woman with child, or prescribe for any such woman, or advise or procure her to take any medicine, drug, substance, or thing whatever, or shall use or employ any instrument or other means whatever, with intent thereby to produce the miscarriage of any such woman, unless the same shall have been necessary to preserve her life, shall, in case the death of such child or of such woman be thereby produced, be guilty of manslaughter in the second degree."

This section omitted the word "*quick*," thereby relieving the prosecution from the necessity of proving a fact almost impossible. It further altered the *intent* to the production of the miscarriage of the woman, instead of to the destruction of the child. Its defects will be subsequently pointed out.

SEC. 2. "Whoever shall unlawfully supply or procure any

medicine, drug, substance, or thing whatever, knowing that the same is intended to be unlawfully used or employed, with intent to procure the miscarriage of any woman, whether she be or be not pregnant, shall be deemed guilty of a misdemeanor, and shall, upon conviction, be punished by imprisonment in the county jail not less than three months, nor more than one year, or by a fine not exceeding one thousand dollars, or by both such fine and imprisonment."

SEC. 3. "Every person offending against either of the provisions of this act shall be a competent witness against any other person so offending, and may be compelled to appear and give evidence before any magistrate or grand jury, or in any court, in the same manner as other persons; but the testimony so given shall not be used in any prosecution or proceeding, civil or criminal, against the persons so testifying.

To sum up the whole matter, the law in the State of New York at the present time, upon this subject of criminal abortion, stands as follows:

1. "The willful killing of an unborn *quick* child by any injury to the mother of such child, which would be murder if it resulted in the death of such mother, shall be deemed manslaughter in the first degree." (2 Rev. Stat., 1st ed., p. 661, § 8.)

2. "Every woman who shall solicit of any person any medicine, or drug, or substance, or thing whatever, and shall take the same, or shall submit to any operation or other means whatever, with intent thereby to procure a miscarriage, shall be guilty of a misdemeanor, and shall upon conviction be punished by imprisonment in the county jail not less than three months, nor more than one year, or by a fine not exceeding one thousand dollars, or by both such fine and imprisonment." (1 Laws of 1845, chap. 260, § 3, p. 285.)

3. "Any person who shall administer to any woman with child, or prescribe for any such woman, or advise or procure her to take any medicine, drug, substance, or thing whatever, or shall use or employ any instrument or other means whatever, with intent thereby to produce the miscarriage of any

such woman, unless the same shall have been necessary to preserve her life, shall, in case the death of such child or of such woman be thereby produced, be guilty of manslaughter in the second degree." (2 Laws of 1869, chap. 631, § 1, p. 1,502.)

4. "Whoever shall unlawfully supply or procure any medicine, drug, substance, or thing whatever, knowing that the same is intended to be unlawfully used or employed with intent to procure the miscarriage of any woman, whether she be or be not pregnant, shall be deemed guilty of a misdemeanor, and shall, upon conviction, be punished by imprisonment in the county jail not less than three months, nor more than one year, or by a fine not exceeding one thousand dollars, or by both such fine and imprisonment." (2 Laws of 1869, chap. 631, § 2, p. 1,502.)

5. "Every person offending against either of the provisions of this act shall be a competent witness against any other person so offending, and may be compelled to appear and give evidence before any magistrate or grand jury, or in any court, in the same manner as other persons; but the testimony so given shall not be used in any prosecution or proceeding, civil or criminal, against the persons so testifying." (2 Laws of 1869, chap. 631, § 3, p. 1,503.)

The defects observable in the existing law, more particularly in the first section of the act of 1869, above quoted, may now be pointed out:

1. That section does not justify the procurement of a miscarriage, *except* when necessary to save the life of *the mother*. Cases may, however, occur where, in the judgment of an experienced medical man, premature labor should be induced, and be absolutely necessary to save the life of *the child*. Hence, the statute ought properly to comprehend either contingency.

2. As the section now reads, the offence is declared to be "manslaughter in the second degree," which is a statutory felony and punishable as such (3 R. S., 5 ed., p. 941, § 20),

by imprisonment in a State prison "for a term not less than four *and not more than seven years.*"

As the proper name for the intentional destruction of the *fœtus* is unquestionably *murder*, it is hoped the time will soon arrive for its punishment as such. It has been truly and forcibly said that an induced abortion, if undertaken before the viability of the *fœtus*, necessarily contemplates and intends its death. And it may be added, the same is nearly certain to result at a subsequent period, from injuries inflicted on itself or its mother during the operation. The subsequent death of the latter, when, as too often happens, she succumbs to the operation or its consequences, does not change the character of the crime, but rather adds to it the enormity of a *double murder*. But it is of importance, as fixing the true character of the deed in at least its moral aspect, to bear in mind that an abortionist does not intend the death of the mother. Through all his wickedness and ignorant bungling, it is at once his interest and aim to save her life. But he must always and necessarily intend the destruction of the *fœtus*, if he attempts or induces an abortion before the period of its viability. Consequently as already observed, the crime is, in regard to the *fœtus*, an act of cool, deliberate, unrelenting murder, or attempt at murder, and the mother is often, undoubtedly, *particeps criminis*.

In view of the foregoing fact, it has been suggested by some of the most influential jurists of this city that the offence specified in the first section of the act of 1869 should be made a capital felony. One of these distinguished gentlemen, Judge Bedford, to whom the committee is indebted for valuable assistance, has since explained that his advocacy of this view was only intended for its effect on "professional" abortionists. However intrinsically just such a view may be, and is in the opinion of your committee, any serious attempt to carry it into practice at the present time would probably result in lessening the chances for a conviction in any case. This is evident from the recent trial of Rosenzweig in the New York General Sessions, when two jurors united in a re-

commendation to mercy, thus showing a disinclination to convict even of a felony, though the prisoner did not attempt to justify his conduct, but rested his defense upon his alleged innocence of the whole matter. And, under the section of the Revised Statutes still in force (2 R. S., 1st ed., p. 661, § 8), it is questionable whether, when the facts of the case warrant the indictment as for murder under that statute, a conviction therefor would not be upheld as good.

For these and similar considerations your committee have not thought it expedient to advocate any change in the *denomination* of the crime under consideration. They have chosen what they believe to be a more practical course ; one which, if adopted, will, they apprehend, give an effectual check to the practice of criminal abortion.

There can be no question, in a community so grievously shocked as this by the terrible deeds of certain abortionists lately exposed, that some serious defect in the existing statutes, which not even the punishment at present authorized by law to be inflicted can overcome, renders them less efficacious than they ought to be in checking child-murder. A statutory enactment punishing the crime with death would be the most effectual preventive if it were practicable ; but, while there remains a doubt on this subject, such a change may be substituted in the degree of punishment already awarded as will doubtless prove of almost equal effect. The *maximum* of punishment now inflicted is clearly insufficient for this purpose. In the following act it is proposed to make the offense a felony without specific name, and to fix the *minimum* of punishment at not less than four years, leaving the *maximum* to be proportioned to the degree of guilt, as shown by the facts in the specific case, at the discretion of the court. Such discretionary power seems requisite to meet certain aggravated cases of criminal abortion. After the jury have found upon the facts of the case and returned a verdict, say of guilty, it is then the privilege of the judge, before passing sentence, to consider the circumstances peculiar to the criminal act. It may be a first offense, or other suffi-

cient reasons may lead him to mitigate the severity of the punishment which he is called upon to inflict. On the other hand, the criminal before him may be a "professional" abortionist, a being who recognizes no higher law than his own base interests, whose heart has long ceased to know a humane feeling, whose soul is freighted with abominable crimes, whose hands are stained with the blood of innocent children, victims of his foul lust for gain. The sentiments of our common humanity revolt against so vile a wretch. Shall he be suffered to return to his old haunts and his old evil ways, with appetite whetted for more blood, after a few years spent in prison? All experience utters a solemn warning against so blind a policy.

3. The first section of the act of 1869, while providing for the punishment of any person who shall advise or procure any woman with child to take any medicine, etc., strangely enough, omits to provide for the punishment of any person *who shall advise or procure the use or employment of any instrument or other means.* So that, as the law stands, if the seducer, or person desirous of causing the miscarriage of the woman, intentionally advises or procures her to take any medicine, he is guilty of a felony; but quite otherwise if he advises or procures *instruments* to be used for the same purpose.

The passage of the following act will, it is believed, remedy the defects in the existing law:

AN ACT for the better prevention of the procurement of abortions and other like offenses, and to amend the laws relative thereto.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. The first section of an act entitled "An act relating to the procurement of abortions and other like offenses," passed May 6, 1869, is hereby amended, and shall read as follows:

SECTION 1. Any person who shall administer to any woman,

or advise or procure her to take any medicine, drug, substance or thing whatever, or shall use or employ, or advise or procure her to submit to the use or employment of any instrument or other means whatever, with intent thereby to produce the miscarriage of any such woman, unless the same shall have been necessary to preserve her life or that of such child, shall, in case the death of such child or of such woman be thereby produced, be deemed guilty of a felony, and upon conviction shall be punished by imprisonment in a State prison for a term not less than four years.

SEC. 2. The eighth section of the first article of the second title of the first chapter of the fourth part of the Revised Statutes is hereby repealed.

SEC. 3. This act shall take effect immediately.

Committee :	{	JAMES J. O'DEA, M.D., <i>Chairman.</i>
		ELBRIDGE T. GERRY,
		GEORGE F. SHRADY, M.D.,
		WILLIAM SHRADY,
		STEPHEN ROGERS, M.D., <i>ex-officio Member.</i>
		[GUNNING S. BEDFORD, <i>Member by Invitation.</i>

[This Act was subsequently passed in the following form, and is now the law on this subject.—ED.]

LAWS OF NEW YORK.—By Authority.

[Every law, unless a different time shall be prescribed therein, shall commence and take effect throughout the State, on and not before the twentieth day after the day of its final passage, as certified by the Secretary of State, Sec. 12, title 4, chap. 7, part 1, Revised Statutes.]

CHAPTER 181.

AN ACT for the better prevention of the procurement of abortions and other like offenses, and to amend the laws relative thereto.

PASSED April 6, 1872; three fifths be present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows :

SECTION 1. Any person who shall hereafter willfully admin-

ister to any woman with child, or prescribe for any such woman, or advise or procure her to take any medicine, drug, substance or thing whatever, or shall use or employ, or advise or procure her to submit to the use or employment of any instrument or other means whatever, with intent thereby to procure the miscarriage of any such woman, unless the same shall have been necessary to preserve her life or that of such child, shall, in case the death of such child or such woman be thereby produced, be deemed guilty of a felony, and upon conviction shall be punished by imprisonment in a State prison for a term not less than four years or more than twenty years.

§ 2. Any woman pregnant with child who shall take any medicine, drug, substance or thing whatever, or shall use or employ, or suffer any other person to use or employ, or submit to the use or employment of any instrument of other means whatever, with the intent thereby to produce the miscarriage of the child of which she is so pregnant, unless the same shall have been necessary to preserve her life or that of such child, shall, in case the death of such child shall be thereby produced, be deemed guilty of a felony, and upon conviction shall be punished by imprisonment in the State prison for a term not less than four years or more than ten years.

§ 3. Every person who shall administer to any pregnant woman, or prescribe for any such woman, or advise or procure any such woman to take any medicine, drug, substance or thing whatever, or manufacture, advertise or sell any such medicine, drug, substance or thing whatever, or shall use or employ any instrument, or other means whatever, with intent thereby to procure the miscarriage of any such woman, shall upon conviction be punished by imprisonment in a county jail, or in a State prison, not less than one nor more than three years, in the discretion of the court.

§ 4. Whosoever shall unlawfully supply or procure any advice, instruction, medicine, drug, substance or thing whatever, knowing that the same is intended to be unlawfully used or employed, with intent to procure the miscarriage of

any woman, whether she be or be not pregnant, shall be deemed guilty of a misdemeanor, and shall upon conviction be punished by imprisonment in the county jail not less than three months nor more than one year, or by a fine not exceeding one thousand dollars, or by both such fine and imprisonment.

§ 5. All acts and parts of acts inconsistent with this act, are hereby repealed.

§ 6. This act shall take effect immediately.

STATE OF NEW YORK. }
Office of the Secretary of State. } ss.

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said original law.

G. HILTON SCRIBNER,
Secretary of State.

HOMICIDE BY POISONING.

BY WOOSTER BEACH, M. D. *

IN all civilized communities, the most important object of legislation is the protection of human life.

The highest crime known in our law is homicide, and it is the only one punishable by death.

The growth of civilization appears to go hand in hand with efforts taken to prevent the shedding of human blood. The savage finds his aged parent is unable conveniently to take part in the roving of his tribe, and he knocks him on the head without compunction of conscience or calling forth a protest from his associates. A little higher up in the scale, the murderer is, perhaps, punished, but life is valued so low that the death penalty is inflicted for comparatively trivial crimes.

We reach at last the enlightened nations, where the taking of human life is ranked by law as the greatest of crimes.

The history of our own land embraces a time when the death penalty was in use for lower grades of offences than at present. As increased progress in intelligence and morality in society advance the value and importance of life, it seems not unlikely that we may, in time, safely look for the entire abolition of capital punishment.

With the increased appreciation of the value of life has come a desire for its prolongation and protection, and for the fulfillment of both these objects society looks to the lawyer and to the physician: the latter, to point out the various dangers tending to shorten or destroy life, and suggest means

* Read before the Society, December 14, 1871.

to avert them ; and the former, to enact and administer laws that shall carry such means into effect.

Administration of poison as a means of murder has been common as far back as history extends, and that it is still frequently practised our newspapers almost daily attest. We are all familiar with the Borgias of the sixteenth century ; with the Aqua Tofana, a poison used to a fearful extent in Italy, with which the female whose name it bears confessed to having, by its use, caused the death of six hundred persons.

Christison says : “ The crime of poisoning, from its nature, must be a secret one. But little apprehension need be entertained of the art of secret poisoning as understood by Tofana or Brinvilliers, or as it might be improved by a modern imitator. It seems to have escaped the attention of those who have written on the subject, that the practice of such an art requires not only the knowledge of a dextrous toxicologist, but also of a skilful physician ; for success must depend on the exact imitation of some natural disease.” Notwithstanding this assertion, we have reported every few months a repetition of the Borgia horror, although not on so large a scale as the original. In the year 1828, Margaretha Gottfried, a woman in affluent circumstances, residing in North Germany, was arrested for murder by poisoning. For over fifteen years she had been practicing her fatal art undetected. The death of fourteen persons had been traced to her, and some twenty others were known to have taken her deadly draughts ; but without losing their lives. Arsenic was the poison employed. At about the same period a servant named Zwanziger, a resident of Bavaria, gave arsenic to some fifteen individuals without exciting suspicion.

These cases occurred at the beginning of the present century, when the study of toxicology was not by any means neglected, the authors then treating of that subject still ranking high as authority, and in a country where the police system is the most perfect in the world, and where all the advantages which science lends to the detection of crime are

most faithfully applied. Within a few months a woman in Baltimore was accused of crimes precisely similar to those of Zwanziger and Gottfried, and in Massachusetts at present a woman is about to be tried for causing a number of deaths under like circumstances. As a matter of course, or almost as a matter of course, it is only the last crime committed by the individual that is detected—that murder being brought to light by some accident, or the want of care in the poisoner, the natural effect of his previous success.

It is to the consideration of the chances of homicidal poisoning remaining undetected that this paper is given. It will be its purpose to show that there is a strong probability—it may safely be said a certainty—that undetected murder by poisoning is of frequent occurrence.

From an examination of a large number of homicides of this class, I find that, as a rule, suspicion against those committing them has been aroused by some accident, and not through the instrumentality of police regulations, or other means usually employed to discover crime. To illustrate this, as well as some other points further on, I beg leave to call attention to a few cases, the outlines of which are probably familiar to most of my hearers.

In 1857, the wife of James L. Stephens died after a short illness. She was attended by two physicians, one succeeding the other in the treatment. They treated her during the attack till the time of her death, when the one in attendance last gave a burial certificate, which followed the usual course prescribed by law, being presented to the City Inspector for a permit, on which Mrs. Stephens was interred, as some others are, without any one being the wiser as to the cause of her death. To be sure, there were some suspicions of foul play in the minds of one or two of the relatives of the deceased; but the apparent wisdom of the attending physicians, who saw nothing unnatural in the woman's death, allayed them. Subsequent events transpired, however, the effect of which counterbalanced the profound learning of the physicians, and pointed to Stephens as the murderer of his wife. A year

after her death, the body was disinterred, arsenic was discovered in it, and with this and other evidence he was convicted and executed.

Here is a case where the most common of all poisons was given, its effects clearly seen by two physicians, and yet no suspicion of the true cause of her demise was entertained by them. The burial certificate stated that inflammation of the stomach was the cause of her death.

George C. Hersey was executed in Massachusetts for the murder of Betsey Frances Tirrel by administering strychnine to her. She had become pregnant by him, and the concealment of the fact was the apparent motive of the crime. I quote an extract from the opening sketch of the District Attorney, giving a lucid history of the case. After saying that Hersey had been on an errand for the family, he proceeds as follows: "On their arrival at the house, at about eight o'clock in the evening, the defendant, after disposing of the horse and carriage, came into the room in which the family were sitting, and immediately prepared to retire to his room for the night, which was so unusual a thing at that early hour that Mrs. Tirrel asked him if he was going to bed so soon. He replied, 'Yes;' giving as a reason that he had a violent headache, and immediately went up to his room. The family then for the first time heard him speak of his headache. Did he then in truth seek his couch for rest and as a cure for bodily ills? Or did there remain some needed preparation for the work that night to be accomplished? Was there a fatal dose to be poured out and made ready for his unsuspecting victim, so that she might receive it as she passed his door?

"I fear that his malady was one for which the couch had no cure, and which drives sleep from the pillow.

* * * * *

"It will conclusively appear in evidence that at this time Betsey Frances was advanced three or four months in a state of pregnancy, and we expect to satisfy you that the defendant was the father of the child.

“It is the theory of the government, authorized and fully sustained, we think, by the facts in the case, that, having surrendered her virtue and her honor to George C. Hersey, the defendant, and having found that the consequences of her indiscretion were about to bring ruin on herself and shame and disgrace upon her family, she came readily to desire that she might be relieved from her situation by the use of some drug.

“To the defendant, the author of her misery, she looked for the help; and to whom else could she turn for help in such an hour? She knew that he was to prepare for her that night a potion which she, in her confident simplicity, believed would save her from shame and restore her piece of mind, which her own folly had served more to distract than even that dispensation which had bereft her of her sister Mary. Confident in this belief, she was more cheerful and happy that night than she had been weeks before.

“Before Betsey Frances lay down upon her bed, upon which also slept the young sister Louisa, she left the room for a moment; but whither she went or upon what errand, the young, drowsy sister took no note. After some delay in preparation, she finally got into bed beside Louisa, who instantly fell into the gentle sleep of childhood.

“We know no more until, after a short space of time, not exceeding half an hour, the young sister awoke in alarm, and found Betsey Frances, apparently speechless, trembling and twitching in every limb. The little girl called, ‘Mother, Frances is in a fit!’ The mother heard the cry, and was listening to hear it repeated. In a moment Hersey, who was quick to detect the sound of distress from that room, rushed into the room of Mr. and Mrs. Tirrel, and summoned them, saying, ‘Frances is in a fit or something.’ After calling Mr. and Mrs. Tirrel, the defendant led the way into Frances’ room, he entering first, the father next, the mother following. In answer to the earnest enquiry of the mother, ‘What is the matter?’ Frances answered only, ‘I shall die; I shall die;’ and once said, ‘Give me some physic;’ and this is all

which the spasmodic action of the muscular system allowed her lips to utter. A few mute spasms of a singular character, the peculiarities of which were carefully noticed and will be minutely described, ended her earthly existence."

I extract from the evidence on the trial the testimony of the physician who had attended the family, and who made the autopsy in the case :

"Appleton Howe, sworn : I was first called to deceased by Hersey, and, when I arrived where she was, I found her dead. After consultation with her father, I decided to make a post-mortem examination. Mr. Hersey requested to be present, and was allowed to do so."

After describing the manner of making the examination, and the appearance of the heart, lungs, and so forth, he proceeded to testify : "The next step was to examine the abdomen. The question came up whether we should commence the examination at the stomach or at the pelvis, and it being determined that it would be more convenient for the individual holding the knife to begin at the lower part of the abdomen, the small intestines were raised at the pelvis, and in doing so pregnancy was brought to notice at once. Dr. Tower said, 'Look here,' pointing to the womb. I saw enough to convince me that pregnancy existed. I then turned to Mr. Hersey, who stood a little to my right and to the back of me, and told him we should be glad to have him leave the room, as we should like to be alone. He immediately left the room, and I did not see him again.

"It was decided to communicate the condition of things to the friends, and it was first communicated to Mr. Tirrel's sister.

"*I then determined to call a coroner*, and let him investigate the case. Mr. Tirrel directed me to take such measures as I thought best, and I immediately called Coroner Birney."

The autopsy was concluded after the coroner arrived.

There had been two sudden deaths in Mr. Tirrel's family, otherwise it is not probable that the post-mortem examination would have been made. Although the moral evidence

against Hersey was strong, and the symptoms indicating death by strychnine now seen plain, it is evident that the physician who examined the body was not by any means certain that death had resulted from poison.

It was not until he discovered that the deceased was pregnant that his suspicions were sufficiently awakened to call the coroner. Had he not have discovered pregnancy, it is likely that congestion of the lungs or of the brain, or something else as indefinite that may be found in any dead body, would have satisfied him as to the cause of death.

The mistakes of the doctors in these cases will by many be ascribed to stupidity, but I believe that similar errors may be made by the majority of physicians. As a rule, very little is known by the profession of toxicology, and death by poison will most naturally be ascribed by the doctor to the disease most resembling the action of the poison. It is a grave affair to assert to a family that one of their members may have been taken off by poisoning, and a medical attendant might well hesitate before making such a charge.

Christison says: "It is now laid down by every esteemed author in medical jurisprudence that the symptoms, however exquisitely developed, can never justify an opinion in favor of more than high probability"; and, again, when treating of arsenic: "The present doctrine of toxicologists and medical jurists seems universally to be that symptoms alone can never supply decisive proof of the administration of arsenic. This opinion is certainly quite correct when applied to what may be called a common case of poisoning with arsenic, the symptoms of which are little else than a burning pain in the stomach and bowels, vomiting and purging, feeble circulation, excessive debility and speedy death. All these symptoms may be caused by natural disease, more particularly by cholera, and consequently every sound medical jurist will join in condemning unreservedly the practice which prevailed last century, of deciding questions of poisoning in such circumstances from symptoms alone."

Cholera morbus, peritonitis, the violent invasion of the

exanthemata or of fevers generally, may produce rapid death resembling the action of poison by arsenic.

Another disorder that, so far as I can learn, has not been mentioned as resembling irritant poisoning, is a violent emesis that frequently proves fatal in a very short time, and occurs to those addicted to the immoderate use of liquor. In my experience in the coroner's department, I meet such cases almost daily. I will not take time to give a full description of the ailment, but merely state that it is marked by persistent and obstinate vomiting, excessive thirst, considerable prostration, and usually terminated by a sudden and generally unexpected sinking of the vital powers, followed very soon by death.

I have known the cramps and pain attending hæmorrhage from a ruptured aneurism to have caused suspicion of death by irritant poison, and the like symptoms caused by rupture of the sac in an extra uterine foetation have produced a similar impression.

The effects of the narcotic poisons closely resemble those from natural disease. Epilepsy, meningitis, compression of the brain, apoplexy, or fatal syncope may cause death in a way not easily distinguishable from that resulting from narcotism.

A case illustrating this point came under my notice a short time ago.

A negro, aged 45, porter by occupation, was reported to the coroner to have died suddenly. On investigation it was found that he had attended to his business faithfully for a week before his death, apparently in good health, only complaining of some headache. At five in the afternoon he left his store on account of his headache becoming more severe. He went home at once, and shortly after arriving there he became slightly, then fully unconscious, fell off in a profound sleep, from which he could not be aroused, and continued in this state till he died at five the next morning. With the exception of the headache, which, if it had not been so speedily followed by death, might have been unnoticed, the case

could have easily passed for one of narcotic poisoning. I confess to some surprise when, on opening the brain, I discovered unmistakable signs of acute meningitis. No physician had attended the deceased, and I was obliged to rely upon the statement of friends for a description of his symptoms.

I will describe another case of interest where two physicians were in attendance. A young girl of about ten had been treated for what appeared to be a slight ailment by an *irregular doctor*, but, her case becoming more alarming, two physicians, both intelligent men in good standing, were called in, and she died very soon after they saw her. She had received a mixture from the first medical attendant, to which her death was attributed by the friends, and their convictions appeared to be shared by the physicians. A druggist who had seen the mixture declared that it contained aconite, and the symptoms preceding death were thought by the physicians to have been the effect of that poison. Autopsy revealed, in this case, acute meningitis; and a little more care in a subsequent examination of the suspected mixture indicated that it contained lobelia instead of aconite.

Now, in this case, suppose the order of things to have been reversed, and death from aconite had actually taken place. Could a physician be accused of special ignorance if he attributed the fatal result to meningitis?

Poisoning by strychnine may be mistaken for tetanus, hydrophobia, or almost any form of disease in which convulsions occur. To be sure, the violence and character of the convulsions from the poison, together with the rapid fatal termination, ought to distinguish its effects from those of disease; but it must be remembered with this, as with other kinds of poisoning rapidly fatal, that their actions are rarely seen by the physician, and frequently not by any one, but, when noticed by non-medical persons, it is during a time of great confusion and excitement naturally connected with a violent illness and a death-bed scene. A history gathered from the statements of such observers would make it very

difficult for ever so intelligent a physician to definitely determine the exact mode of death.

A young man of about 21, while in the West, lost the sight of both eyes by the accidental discharge of a gun, the ball passing in close contiguity to the brain. He was brought to this city almost immediately afterwards, where efforts were made to recover the use of his eyes, but were abandoned in a few months as hopeless. From the time of the accident he was much depressed in spirits, and seemed to evince a suicidal tendency, causing him to be closely watched by his parents. He died suddenly about six months after reaching the city. His mother was with him during the time just preceding death, and she described his symptoms and conduct as follows :

The first that she noticed unusual about him was that he complained of slight nausea when he lay down upon a lounge in the room. He remarked that he would die, but did not appear particularly ill. Soon after he was seized with convulsions, which were described as slight. Their character could not be well made out from her description, but from what could be learned they did not appear those of strychnine poisoning. A well-known physician of high standing was called in after death, and, on closely questioning the mother, he decided that some brain trouble produced by the musket-ball had caused death.

Suicide by strychnine had been considered, but there seemed to be no possible way in which the deceased could have procured that poison, and the manner of death was thought to argue against it.

The case was referred to the coroner.

On post-mortem examination the brain was found normal, as, in fact, were all the other organs. Near the pyloric end of the stomach was discovered a small amount of white crystallized matter, the appearance of which, in spite of evidence against death by strychnine, we were compelled to ascribe to that drug. It yet remains a mystery how a totally blind person, carefully watched with the object of preventing

suicide, should have procured that poison. I should say that I subsequently proved, by testing, the article to be what we had suspected.

The effects of cyanide of potassium, although exerting its deadly power almost instantaneously, have sometimes been mistaken for disease of the heart, apoplexy, and other natural diseases causing death.

These allusions to the similarity between the action of certain poisons and disease are made with the object of showing that it would not be at all difficult for an individual to die of poisoning, and his death to be ascribed by the physician attending him, or one called immediately after his death, to natural causes.

It is almost unnecessary to say that, where a motive for murder is strong, and an opportunity occurs for its commission without detection, the crime has been and will be common among us.

It is not with the low and ignorant only the offence is to be looked for. History, as well as daily observation, teaches us that the most deeply laid and atrocious murders have been traced to individuals of great intellectual attainments, and occupying high places in society.

Most of us know of the killing of Parkman by Professor Webster, the many murders of Wainwright, as described by Dickens, and of the man Palmer, an English case. Within the last few days, the murder of his wife by John Selby Watson, has attracted considerable attention, and I take the liberty of quoting entire the leading article of a daily paper in reference to it :

“The perpetration of wife murder is not so unusual an occurrence as to excite any very considerable attention on the part of the public, unless the circumstances of the crime are of an extraordinary character. When, however, an educated Episcopalian clergyman, over sixty years of age, murders his wife, who is almost his equal in years, on his own hearthstone, and then endeavors to conceal the deed by attempting to remove her body in a chest, the case is decid-

edly interesting. Such are the principal facts in the Stockwell tragedy, the account of which we have already published.

“The Rev. John Selby Watson graduated with high honors at Trinity College, Dublin, thirty-three years ago. One year after taking his degree he was ordained, and became a minister of the Church of England. He did not long officiate as a parochial clergyman, for he was soon elected headmaster of the Stockwell Grammar School in Surrey. This position he had retained for upwards of twenty-five years previous to the 6th of October, 1871, living, with his wife and a female servant, in the neighborhood of the school. He was in comfortable circumstances, and was, to all appearances, happy in his family relations. After the custom of many teachers, he became an author. Several volumes of translations in Bohn’s Classical Library—a series of works with which college students, to whom they are known as ‘ponies,’ are quite familiar—were written by him. He edited Pope’s Homer, and a number of Latin and Greek authors, besides writing a book on ‘The Reasoning Power in Animals.’ It seemed as if he had more than most men to make his old age content. He could look back upon a career both creditable and satisfactory. He was not exposed to the sufferings of extreme poverty. He enjoyed the companionship of his books, and the affectionate regard of his pupils, who, we are told, were wont to seek his assistance and advice when in trouble.

“If there seemed a person in the world unlikely to do murder, this was the man. Yet, on the second Sunday of last month, in the evening, while the servant was absent, he killed his wife by crushing her skull with the butt of a pistol. On the servant’s return, he informed her that his wife had gone to the country, to remain five or six days. He retired as usual, spent the two following days in arranging his books and papers, and on the succeeding Wednesday took poison, but was not killed by it. On the arrival of the physician summoned by the servant, he handed him a paper, on which were written these words:

“‘In a fit of fury I have killed my wife. Often and often have I endeavored to restrain myself, but my rage overcame me, and I struck her down. Her body will be found in the little room off the library. I hope that she will be buried as becomes a lady of birth and position. She is an Irish lady, and her name is Anne. The key is in a letter on the table.’

“It has often been doubted whether intellectual education tends in any wise to repress crimes against honesty. The life of Bacon is frequently cited as evidence that it does not. Froude, the English historian, maintains that our modern education has only increased the relative proportion of rogues in the community. ‘I doubt very much indeed,’ he says, ‘whether the honesty of the country has been improved by the substitution so generally of mental education for industrial.’ As to deeper and darker crimes, however, the question is still more important, and far less easy to answer. It is difficult to believe that intellectual culture exerts no influence to prevent the commission of murder and kindred offences. To say that moral education alone can do this, even if the truth of the proposition be admitted, explains nothing; for the mere fact of intellectual culture must affect the moral faculty, and must affect it in some proportion to the extent and thoroughness of such culture. This murder in England is the act of a man of superior mental acquirements. His familiarity with the moral law is of no moment, because the instances of its violation by its most attentive students are sadly numerous in the history of crime. The noteworthy fact is that the most liberal education, followed by years of literary toil, and consequent increase in intellectual culture, will not suffice to restrain a man from the commission of the highest crimes.”

In this case, although the note of Watson says that he killed his wife in a fit of fury, it is improbable, from his conduct afterwards in hiding the body, and other circumstances. The murder was, without doubt, premeditated.

Criminal records of all countries shows deliberate murders almost without number by stabbing, shooting, drowning, beat-

ing, and many other methods, but homicide by poison is comparatively rarely observed. In this city, for example, we have some fifty homicides a year, but there has been no conviction for murder by poison in several years.

Is it probable that none have occurred? In view of the ease with which murder of this kind can be accomplished, of the chances against its detection, of the strong motive in many wicked persons to commit the crime, I do not think I can be accused of a distorted imagination or of great exaggeration when I assert that, for one homicide by poison that comes to light, there are ten that are never known except to the perpetrator and to Him who knoweth all things.

The annual number of suicides in this city averages about one hundred. The means employed for self-destruction are various, but quite uniformly one-third of those ending their own existence do so by poison.

Is it not a fair inference that, if poison would be thought of by a certain number of individuals as a means of taking their own life, it would enter the minds of an equal number of other individuals as a means of taking the lives of others? Murderers and suicides, though perhaps not to be compared with one another as far as guilt is concerned, would probably be equally well acquainted with poisons and their mode of action, and the one would be as likely as the other to make use of them in carrying out their purpose.

The machinery for the administration of justice is not to be depended upon to make the first discovery of a homicide of this class. Accident almost invariably takes the initial step in pointing out the crime; but, when suspicion is once aroused, the expert detective, the acute lawyer, and the skillful chemist combine to unearth it, and mete out justice to the guilty one.

Undoubtedly modern science has given valuable aid, and continues every day to add strength to the law in accomplishing this object. The wholesome fear to the criminal exerted by the adroitness of the chemist in bringing secret murder to light certainly exerts a strong influence in preventing crime,

but we need something more for the protection of the community. We want to know with certainty the precise cause of death or of an attack of illness afflicting any one of its members, and it is only in this way that we can positively know that the poisoner is not at work among us.

That this object is not now attained, even in cases where suspicion should have been excited, I think I have shown. Can it be done? I believe it may, at least to answer the purpose indicated, and it is on the medical profession that the duty of accomplishing it falls.

In the first place, physicians in general practice should be better versed in medical jurisprudence, and more especially in toxicology.

Our colleges now only touch on these subjects, and that mostly with the object of not leaving the student entirely unacquainted with the duties of a medical witness.

Were forensic medicine more thoroughly and universally taught, even in its present rather neglected state, we would have in the physician a guardian of the lives of our citizens in every household, and it would be almost an impossibility for homicide by secret poisoning to occur.

With increased attention to the subject, our acquaintance with it would extend, and more careful study would so perfect the science that much that is now vague and uncertain in it would be replaced by positive and substantial knowledge.

Symptoms, especially, upon which the medical attendant must mostly rely for his discovery of illness by poison, would, with greater care in observation and classification, be adequate to reduce to a certainty what now can only be considered a probability. There are many changes in the mode of administering the law that would add to the certainty of detection of secret poisoning, but their consideration would furnish abundant material for another paper. I will here merely allude to these changes, without now attempting to show how they could be carried out :

First. All dead bodies should be viewed by a proper medical officer before burial.

Second. Post-mortem examinations should be more frequently and more thoroughly made.

Third. A chemist appointed by government should always stand ready to make analyses when required.

Fourth. The bureau that inspects certificates of death and grants permits for burial should use greater circumspection in its operation.

Fifth. No body should be interred on a burial certificate granted by an uneducated physician.

MEDICO-LEGAL POINTS

IN THE CASE OF

DAVID MONTGOMERY.

BY WILLIAM A. HAMMOND, M. D.,

PROFESSOR OF DISEASES OF THE MIND AND NERVOUS SYSTEM, AND OF CLINICAL
MEDICINE IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE, ETC.

In the spring of last year I was requested by the District Attorney of Monroe County, in this State, to read a transcript of certain evidence which had been adduced at a preliminary examination in the case of David Montgomery, indicted for the murder of his wife.

Upon a careful consideration of this evidence I gave it as my opinion that epilepsy of itself was not sufficient to destroy responsibility, and that, though the prisoner had probably suffered from occasional epileptic seizures, there was nothing to show that the crime of which he was accused was in any way the result of such a paroxysm. On the contrary, the circumstances appeared to indicate that the prisoner acted with deliberation and full reason. I, however, stated that I could not give a definite opinion on these latter points without examining the accused.

A preliminary examination had been made before a jury to determine the mental condition of the prisoner, the law of the State of New York not allowing of the trial of a person not of sound mind. A commission, composed of physicians, examined him, and, though they reported that he was insane, other testimony to the contrary was given, and the jury disagreed on the question submitted to them. As this result

* Read January 11th, 1872.

was equivalent in law to a declaration of sanity, the trial was ordered to take place. The result was a conviction of murder in the first degree. The medical experts who supported the theory of the prisoner's insanity were Dr. Cook, of the asylum at Canandaigua, and Dr. Gray, of the Utica Asylum; those who thought differently were Drs. Moore and Montgomery, of Rochester, and myself. Two careful examinations of the prisoner left no doubt on my mind of his entire responsibility for the murder. At the same time, there was no question that his intellect was undeveloped, and that he had had occasional paroxysms of epilepsy. There was, however, no mental aberration, and the circumstances of the deed and his subsequent conduct were such as to shut off all idea of unconsciousness.

It by no means follows that an individual suffering from epilepsy is not as fully responsible for his actions as healthy persons.

Reynolds, who has written the best work on the subject in the English language, states that the disease in question, even when fully pronounced, does not necessarily involve mental change. In thirty-eight per cent. of his cases the mind was unaffected in any way.

He further declares that, while considerable intellectual impairment exists in some cases, it is the exception and not the rule.

And also that ulterior mental changes are rare.

Falret, in his valuable essay on the "Mental State of Epileptics" (*"L'Etat mental des Epileptiques"*) says: "The first question which naturally presents itself to the mind, relative to the medico-legal relations of epilepsy, is this: Should all the epileptics who commit criminal acts be regarded as insane, and therefore irresponsible? Some physicians, laying too much stress on the eccentricities of character and of conduct observed with the majority of epileptics, even with those who have preserved all the appearances of reason, declare for the affirmative. They contend that the simple proof that an individual is suffering from epilepsy is sufficient to acquit

him of criminality ; as not having enjoyed mental freedom at the moment of accomplishing the act imputed to him. A doctrine so absolute cannot be accepted without reserve. It extends, to boundless limits, the sphere of irresponsibility, and, if generally adopted by physicians, would greatly lessen their authority in the eyes of magistrates, who will never admit that the sole fact of epilepsy is sufficient to absolve an accused person. Physicians who only observe the epileptics of insane asylums may be inclined to adopt this absolute opinion. In fact, notwithstanding the essentially intermittent character of the intellectual troubles with epileptics, the frequent repetitions of the accessions of delirium leave generally, in the minds of those who experience them, evident and durable traces even in the intervals of the paroxysms. But when we do not restrict our observation to the epileptics who are contained in lunatic asylums, when we extend it to all those who live in society without any one suspecting the existence of this disease, it is impossible not to accord to a certain number of epileptics the privilege of moral responsibility, if not during their whole lives, at least during a long period of their existence.

“The question, therefore, of the responsibility or irresponsibility of epileptics cannot be defined in an absolute manner, since we must consider certain epileptics as guilty of the acts imputed to them ; at certain periods of the disease, the appreciation of this responsibility becomes extremely delicate in each particular case.

“Thus the only practical manner of putting medico-legal questions relative to epilepsy and mental alienation is that which has been hallowed by custom. Was the individual of sane or insane mind when he committed the act for which he was arraigned before the bar of justice? If he was insane, he ought to be considered irresponsible ; if not, he ought to be condemned as guilty.”

It is very certain, therefore, that the mere fact of the existence of epilepsy in a person accused of crime is not sufficient to abrogate responsibility. My own experience abun-

dantly supports this view; and it is well known that some of the greatest men who have ever lived and who were remarkable for their intellectual vigor—Julius Cæsar and Napoleon Bonaparte, for example—were epileptics. Cases have been under my observation in which the disease had lasted for many years without apparent mental derangement or failure.

It frequently happens that the insane in lunatic asylums are at the same time epileptics. But insanity with epilepsy is a very different thing from the insanity which results from epilepsy. It is for this reason that Falret, in the foregoing quotation, attaches little importance to the views of asylum physicians on this subject. And his opinion is the more valuable, as he is himself the superintendent of a large asylum in France.

The essential feature of an epileptic paroxysm, whether it is of the *grand mal* or *petit mal* variety, is unconsciousness. And though occasionally in aborted seizures there may be a kind of semi-consciousness present, the other phenomena of the attack are so characteristic as to be perceived by the patient.

In all fully-developed paroxysms unconsciousness is the essential feature, and without it there is no epilepsy. The individual attacked has, therefore, no recollection of anything which has taken place during the seizure, and the mere fact of such recollection existing is very certain evidence that there was no paroxysm.

There is no case on record of a crime being committed by an epileptic during a paroxysm, and the recollection of it being present.

Crimes may be committed by epileptics without responsibility under three different conditions, and no others: 1. Either as a consequence of mental imbecility resulting from repeated attacks of epilepsy. In such a case the condition of the individual would be one of dementia, and he would be incapable of judging of the consequences of his act, and the act itself would be without motive. 2. During the state of high maniacal excitement which sometimes follows an attack,

and in the otherwise insane precedes it, in which case the act would be indeterminate. 3. During the state of unconsciousness resulting or attending upon the paroxysm. In this case there would be no subsequent recollection.

In a paper on "Epilepsy and Homicide," written by Dr. Isaac Ray in special reference to the Winnemore case, and published in the *Journal of Insanity* for October, 1867, the author says: "If the deed was committed under the influence of his disease, supposing the charge to have been true, we are necessarily led to inquire what particular phase of it was present. No one supposes that his mind was generally so impaired as to be incapable of discerning right from wrong, of knowing that murder is forbidden both by human and divine law, or of controlling the fullest impulses of passion. The act could not have sprung from such a condition as that. Neither is there any ground for the supposition that he was under the domination of that blind fury so frequently exhibited by epileptics before or after a fit, or that his mind was overpowered by apprehensions of dangers, or a sense of persecution and outrage from persons, real or imaginary, about him. Neither of these phases of the disease had he ever exhibited; and, though it is not impossible, perhaps, that the latter occurred on this occasion for the first time, there is not the slightest reason to believe that such was the fact. We then come to the only other epileptic condition in which the act could have happened, that of utter unconsciousness, and, though we have no direct evidence respecting it, neither are we met by any circumstances of the case that would render it impossible. He had been in this state more than once before, and it was one of its incidents that he had no idea whatever of what he thought or did while in them."

The case of Fyler, the first time in this country, in which epilepsy was used as a defense, who was tried in Onondauga County, N. Y., in 1855, for killing his wife, was also one in which there was entire want of recollection of the murderous act. In both Winnemore's and Fyler's cases the prisoners were found guilty. In the first, the penalty was in-

flicted ; in the latter, a medical commission pronounced the prisoner insane, and he was committed to the lunatic asylum in Utica.

In the case of John Reynolds, tried over a year ago in New York for murder, the attempt was made, after conviction, to prove the existence of epilepsy. I examined the prisoner several times before and after the trial, and was satisfied that the crime was not committed through the influence of that disease. He was executed.

In the case of Chambers, who shortly afterward committed a murder in Brooklyn, the plea of insanity was set up. I was requested by the district attorney to examine the prisoner. I did so, and found no evidence of epilepsy beyond the statements of Chambers himself. On his trial another physician testified to the presence of epilepsy. Through a misadventure, I did not get to the court to testify, and the prisoner was acquitted and sent to the lunatic asylum at Utica. He presents no signs, as I have been informed by Dr. Gray, of having any form of mental alienation or epilepsy.

The prisoner Montgomery is twenty years of age, has followed the occupation of a carter, and has never been suspected of mental derangement, dementia, or epilepsy, by those who knew him, outside of his own family. Several members of the family, however, testified, in the previous proceedings relative to his sanity, that he had been subject to epilepsy since infancy, but the commissioners could only satisfy themselves that he had three attacks up to the time of the homicide ; therefore it may easily be assumed that, notwithstanding the possible existence of epilepsy, his mind has not in consequence of such disease undergone marked deterioration.

At the age of about eighteen he married ; but had lived upon bad terms with his wife, who had been a prostitute, and who insisted upon returning to her former occupation. A week before the homicide she left him, taking with her their child, eight months old. On the evening of the day (Saturday) before the homicide, Montgomery went to her mother's,

where she was stopping, and persuaded her to return home with him. They arrived at their own home about twelve o'clock at night, and she was killed the next morning between the hours of six and eight. Many of these particulars, as well as the subsequent ones, are derived from the statements of the prisoner.

From these statements it appears that they awoke early in the morning and began to talk of their difficulties. He told her that, if she would remain at home and stop going with other men, he would forgive her. She replied that she would not, that she was a prostitute when he married her, and he knew it, and that she had always been one and always would be one. He replied that he had made up his mind that, if she would not live with him, she should not live with any one else. He then got out of bed, partially dressed himself, and went to his father's house, a few rods distant, and took from the back-yard an axe, with which he returned to his own residence. On entering the room where his wife was he found her asleep. He stood by the stove a few minutes, deliberating whether he should kill her or not. Finally he determined to do so, and then struck her on the head, just above the left temple, inflicting a mortal wound, of which she died.

He then left the house, and, meeting a younger brother in the street, told him what he had done, and then taking a razor from his pocket attempted to cut his throat. In this effort he was prevented by his father and brother, and was by them persuaded to give himself up to the police. On his way to the jail he stated to the officer that he had at first thought of going to Canada after killing his wife, but, concluding that he would be caught, he had determined to give himself up.

In these particulars there is no one fact indicating insanity, dementia, or epilepsy, besides the fact of voluntary confession and surrender. This, unaccompanied by other evidences of mental aberration, is of little importance, and is materially lessened in its force by the opinion of the prisoner, as ex-

pressed to the policeman, that he thought he would be caught if he attempted to escape.

As regards temporary insanity from morbid impulse, there is no evidence to show that Montgomery had exhibited any indication of mental derangement during the few days preceding the homicide. The facts of the dispute, the repugnance he entertained to his wife's conduct, the deliberation with which he went to his father's house for the axe, and reflected, as he stood by the stove, in regard to his purpose, are at direct variance with any such idea.

They are equally against the idea of such a condition of dementia or imbecility as to indicate a want of knowledge of his acts and their consequences.

As to epilepsy, the circumstances of the affair are absolutely irreconcilable with the theory that the homicide was perpetrated during a paroxysm or an accession of epileptic mania. Instead of a blind fury, there was deliberation; instead of a purposeless act, there were motive and provocation; instead of unconsciousness and subsequent want of recollection, there was complete knowledge of all the circumstances, even to their minutest details; instead of subsequent confusion of ideas, there was distinct recollection.

Admitting that Montgomery has been subject to repeated attacks of both the *grand* and *petit mal*, it is very evident that these were not sufficient to injure his mind to any appreciable extent.

The hereditary tendency to insanity would be of importance if the prisoner had himself, in the perpetration of the homicidal act, or before or after, shown signs of mental derangement. In the absence of such signs, it is of little importance.

The prisoner, as stated, was convicted of murder in the first degree.

A motion for a new trial was made by the prisoner's counsel, and, among other reasons which he adduced, was the fact that I had been paid a large sum to come to Rochester and testify in the case. The views of Judge E. Darwin Smith,

before whom the case was originally tried, are so exactly in accordance with those now held by all the enlightened jurists, relative to compensation to medical experts and are so fair to myself and the district attorney, Mr. Davis, that I subjoin them without comment :

“The next allegation of irregularity is ‘that a medical witness, Dr. Hammond, was produced and gave testimony in the case on the part of the people, by the procurement of the district attorney, under a contract that such witness, not being a poor witness, nor a non-resident of the State, should be paid a consideration of five hundred dollars for attending the court and giving his testimony, and was paid that sum of money, and this without the knowledge of the prisoner or his counsel until after his testimony in the case was closed.’ Upon this statement of facts I cannot perceive upon what ground or principle an allegation of irregularity can be based or sustained ; but it is doubtless due to the importance of the case, the character of the question involved, and to the consideration of what is due to the proper administration of justice in respect to public prosecutions, that the facts contained in the affidavits produced should be more fully stated and considered. From the stenographer’s notes and our own minutes of the trial, we know that the fact and body of the crime for which the prisoner was tried was very clearly proved, and was really undoubted and unquestioned, and that the only defence set up and sought to be established at the trial was that of *insanity*. It appears from the affidavits read on this motion that the case was put over the last February term of this court; upon the allegation that the defendant was insane, and a commission of distinguished physicians was fixed and agreed upon by the attorney-general and the counsel for the prisoner, and assented to and appointed by the court so far as it had power to do so, to ascertain by inspection and otherwise, and report whether the prisoner was or was not insane ; and it also appears and was well known that the case also went over the April term to allow an inquiry to be instituted, and that such inquiry had been instituted by the

county judge, with a jury, under the statute of 1842, to ascertain whether the prisoner was or was not insane—upon which inquisition the jury were unable to agree.

“The case, therefore, was necessarily prepared for and came on for trial at the present adjourned term of the Oyer and Terminer.

“The prisoner, to prove and establish his defence of insanity, called a number of distinguished physicians, and the people also called several physicians upon that issue, and among others Dr. Hammond. In respect to the attendance of Dr. Hammond, particularly as a witness, the facts stated in the affidavits are in substance as follows: The affidavit of the counsel for the prisoner states that preparatory to such court he ‘was induced to write to Dr. Hammond, of the city of New York, and sent a gentleman to see him a few days before the court to inquire (not as to his opinion, but) whether he would come and examine and testify in the case;’* that he received information in reply that he was coming at the request of the district attorney, and would be present; that the trial began on Wednesday, May 17th, and on the following morning Dr. Hammond arrived in the court-house, as the counsel was opening the case for the defence; that he saw Dr. Hammond at noon of that day, and was informed by him that he wished to examine the prisoner, and would make an

*The purport of the counsel’s inquiry will be best judged of by a perusal of his letter to me at the time, and which I subjoin. The sincerity of his opinion relative to compensation of expert witnesses may probably admit of some question, in view of the contents of this letter.

ROCHESTER, N. Y., *May 12, 1871.*

DEAR DOCTOR: I am to defend David Montgomery, charged with the crime of murder, the trial to commence on Tuesday next, in this city. I wish to examine you as an expert witness. If you will be here on *Wednesday morning*, I will release you *Wednesday night*.

I send you, through my brother, the testimony and opinions of physicians, including Drs. Gray, of Utica, and Cook, of Canandaigua, taken on an examination to determine whether Montgomery had intelligence enough to be tried. The jury disagreed. *I have pressed a trial.* I wish the case to be ended. I have not the slightest doubt that the alleged murder was an insane act. The prisoner struck his wife a single fatal blow

impartial examination, and he also saw Dr. Hammond the same evening, and had considerable conversation with him about the case and the condition of the prisoner; that before the prisoner closed his case, he called Dr. Hammond as a witness for the prisoner and examined him at some length, and that the people recalled him in reply when he was further examined; that on Tuesday, the 23d of May, while the counsel for the prosecution was summing up the case for the people, he received information that the district attorney had contracted to pay Dr. Hammond five hundred dollars for coming to Rochester and testifying in behalf of the people; that during the recess at noon he inquired into the facts and found that a warrant of the treasurer had been drawn in Dr. Hammond's favor and paid, for five hundred dollars; that Dr. Hammond was then a resident of the city of New York, and that his reasonable expenses could not exceed fifty dollars, and that on the coming in of the court after the recess he called the attention of the court to the fact in the presence of the jury, and that such payment had been made as above stated with the sanction of the court, which was admitted by the district attorney and not denied.'

"The affidavit of the district attorney on the same subject states in substance that, preparatory to said trial, he took all

with an axe while she was asleep, kissed her and proceeded to cut his own throat with a razor, and was arrested in the act. This was on Sunday, the 13th November last. He made no attempt at escape or concealment. Soon after, he stated that it was his temper, he supposed, which led him to kill her; that he loved her, and she was resolved to be a prostitute. (I think this was true.) Within an hour he stated that he felt compelled to kill her. Shortly after noon, he was quite unconscious of the act, and it is my conviction has now no remembrance of it whatever. The evidence sent to you shows that he has been subject to occasional fits of epilepsy. Still, he has been a strong young man (now twenty years old), and has labored faithfully and well, the neighbors not knowing generally that he was ailing. His friends are poor, but I shall see that you are fairly compensated. The newsmongers and police want an exciting trial and execution, and, to my surprise, have created some prejudice against the young man. Hence the necessity of fortifying the case by the opinions of able and humane men. Please telegraph to me to-morrow.

Truly yours,

J. H. MARTINDALE.

the testimony which had been taken before the county judge as above stated, and went to the city of New York and laid the same and the whole case before Dr. Hammond, and asked him for his opinion upon it, and, learning from Dr. Hammond that he could not give him a satisfactory opinion without seeing and examining the prisoner, he inquired of him upon what terms he could be induced to come to Rochester and make such examination and attend the trial as a witness; and, learning that he could not be induced to come for any thing less than five hundred dollars, he left him, and consulted the district attorney of the city of New York, and the United States district attorney of the southern district of this State, the late Judge Davis, on the subject of the propriety of engaging Dr. Hammond to come to Rochester and attend the trial at the price aforesaid, and was advised by both of said officers that it was customary for district attorneys to employ and pay experts in professional life like Dr. Hammond, and that his charge was reasonable in view of his high reputation and extensive practice in his profession; that deponent then returned home, and consulted the judges of the court of sessions, and several members of the board of supervisors of Monroe County, and also two of the justices of the Supreme Court of this district, on the subject, all of whom advised him that they thought that, as the public prosecutor for the county, he would be justified in making the proposed arrangement to secure the attendance of Dr. Hammond at this court, and advised him to make such arrangement.

“The district attorney further states in his affidavit that on Monday before the trial he informed the counsel for the prisoner that Dr. Hammond would be present at the trial as a witness for the people, and that after his arrival General Martindale had frequent interviews and consultations with Dr. Hammond during the progress of the trial, and took the doctor to his house to spend an evening; and that after such interviews, intercourse and consultations, the said counsel called Dr. Hammond as a witness for the prisoner, and improved him as such, and that he is informed, and believes,

that it is customary throughout the State for the courts to pay professional witnesses for their time, expenses and services, as in this case, upon the application of the district attorney of the county, and that deponent had no other object in calling Dr. Hammond except to elicit the truth before the jury.

“Upon these facts we do not see that the calling of Dr. Hammond as a witness, and the payment to him of a sufficient sum to secure his attendance at the court during the trial, was in any respect an irregularity, or did any wrong to the prisoner. It seems to us that the district attorney was acting in the line of his duty as public prosecutor in securing the attendance of a proper medical witness of high repute to meet the distinguished medical experts which he knew the prisoner expected to call on his side. The question at issue in the trial was chiefly a medical one, in respect to which the opinions of medical men would be likely to exert a great if not controlling influence. The witnesses who had testified before the county judge, and those also who had acted on the commission, were among the most distinguished members of their profession upon the particular questions involved on the trial. Those witnesses the prisoner was expected to call in the trial, and the district attorney would, it seems to us, under the circumstances of the case, have been derelict in his duty to the people of this county if he had not taken the requisite steps to secure the attendance of witnesses of equal distinction and consideration in their profession, on the part of the people. The district attorney, it is true, might have required the attendance of Dr. Hammond on subpoena, but that would not suffice to qualify him to testify as an expert, with clearness and certainty, upon the questions involved. He would have met the requirement of a subpoena, if he had appeared in court when he was required to testify, and given proper *impromptu* answers to such questions as might then have been put to him in behalf of the people. He could not have been required under process of subpoena to examine the case, and to have used his skill and knowledge to enable him

to give an opinion upon any points of the case, nor to have attended during the whole trial, and attentively considered and carefully heard all the testimony given on both sides, in order to qualify him to give a deliberate opinion upon such testimony as an expert in respect to the question of the sanity of the prisoner. Professional witnesses, I suppose, are more or less paid for their time, and services, and expenses, when called as experts in important cases in all parts of the country. The question what amount is paid, or agreed to be paid, in such cases, cannot affect the regularity of a trial. It may perhaps properly affect the question of their credit with the jury. In this case it appears that the facts in respect to the employment and payment of Dr. Hammond were fully and publicly stated in the presence of the jury before the case was given to them, and were well known to them, and may have, and must have had, such influence with them as they thought proper to give to them under the circumstances of this case. We do not, therefore, think they present any ground for a new trial, as a question of irregularity or otherwise.

“The prisoner’s counsel also ask for a new trial on the ground of surprise in respect to the testimony of Dr. Hammond, and of newly-discovered evidence.

“So far as relates to the question of newly-discovered evidence, the application is based upon several affidavits showing that the prisoner has had a fit in the jail since his trial, and it is claimed that this fact tends to show that he did not simulate, on the trial and before, the appearance of an insane person.

“On this question the allegation is in substance that the testimony of Dr. Hammond tended to show that the prisoner’s appearance of indifference and apparent unconsciousness on the trial was assumed or feigned, and that the proof of the fit had at the jail, since the trial, tends to refute such evidence. This is not new evidence in kind or degree, and is really nothing but cumulative testimony on the main issue. Much testimony was given on the trial, proving that the prisoner was accustomed to have fits, had numerous fits in his infancy, and

in his earlier years, and a few later in life, and one in the week previous to the homicide; and this evidence was not questioned or doubted. Proof of another fit occurring after the trial could not affect the question, particularly on another trial. It is not newly-discovered evidence within the rule applicable to such cases, that the newly-discovered evidence to warrant a new trial must be material, and to go to the merits and not be cumulative, collateral, or corroborative, and such as ought to produce on another trial an opposite result on the merits. (*Vide* 'American Criminal Law,' section 3,161.) Such we think quite clearly would not be the effect of making proof of this fit at the jail, just as it is presented in the several affidavits read and produced on this motion.

"On the point of *surprise*, the facts above stated, and contained in the affidavits of the counsel for the prisoner, and of the district attorney, we think do not show that the prisoner's counsel had any just grounds of complaint or surprise, in a legal sense, in respect to the testimony of Dr. Hammond. The counsel for the prisoner states that he advised his client to submit to examination by Dr. Hammond, and that he did submit to such examination, and that Dr. Hammond did not fully disclose to him the whole of such examination. The defence of insanity set up for the prisoner necessarily subjected him to the test of medical examination. I do not see how Dr. Hammond, seeking to make an examination of his person to ascertain the state of his system, his health, and the symptoms of mental disease, as a witness and expert, called in behalf of the people, could properly be denied such an opportunity. To have refused to allow it would have been a virtual admission that such defence was unfounded, and that the appearance of the prisoner in his person and conduct, giving color to such defence and relied upon in part to sustain it, was simulated for the purpose of such defence. The counsel for the prisoner had constant intercourse with Dr. Hammond during the trial, and, finally, virtually took him away from the prosecution, and appropriated him as a witness for the prisoner, by

calling him as such witness and examining him as far as he pleased. Dr. Hammond, so far as we could see, answered all the questions put to him by the counsel, on such examination, with frankness and explicitness; and we cannot see that it furnishes any ground for the complaint of surprise, that he gave further and fuller testimony afterward when called by the prosecution. The fact stated in the affidavit of the counsel, that, when he so called him as a witness, he was ignorant that he had made a contract with the district attorney to appear and testify as a witness, on the part of the prosecution, for the sum of five hundred dollars, cannot, that we see, affect the question of surprise. Certainly the learned counsel knew that Dr. Hammond came to Rochester to examine the prisoner, and attend the trial as a witness in behalf of the people, and upon the employment of the district attorney. It could hardly have been supposed that he came voluntarily, and spent so much of his time, without some compensation, and such compensation to be paid necessarily from the funds of the county, at the instance and upon the application of the district attorney.

“ Within the rule applicable to cases of surprise, in respect to the proceedings of a trial, we do not see any basis of fact upon which the court would be justified in granting a new trial on this specific ground. We cannot see that the prisoner’s case was effected injuriously by any essential surprise in law or fact, or by any accidental or unforeseen occurrence, during the trial, to his prejudice. And, upon the whole case, we think the motion for a new trial should therefore be denied. Motion denied.”

I submit these views and opinions of Judge Smith without further comment, though there are several statements made by the prisoner’s counsel which are based more on fancy than reality.

THE INFLUENCE OF URÆMIC AND ALCOHOLIC POISONING ON TESTAMENTARY CAPACITY.*

BY STEPHEN ROGERS, M. D.

NEAR the close of the year 1869, E. I. C. was quietly, if not clandestinely, married to a man whom, report says, her education, religious and secular, would have, in the ordinary course of events, led her to shun, rather than to love.

A key to the secret of this untoward occurrence is furnished by accumulated evidence, to the effect that she was an incorrigible and hopeless inebriate. Though trained, and fairly educated, in one of the best schools for girls, this vice of drunkenness seized her soon after her return home from school, and, as a consequence, she soon became the cause of constant and harassing care to, and her habits were the bane of the last days of her aged and widowed mother, who died about the date above given, leaving this only child a sole heir to a considerable property.

About the time of the mother's death, this rich and dissolute girl was induced to marry, under the circumstances already stated.

Rumor attributes the marriage to a necessity arising from antecedent illicit familiarity between the parties, favored by the intemperate habits of the girl. However this may be, there is no question that they were married, and the following unusual history commenced. Not long after her marriage, it appears in evidence, she became the victim of attacks which,

* Read before the Society, April 11, 1872.

from the general description given of them by various witnesses, would appear to have been of an hysterical character, more or less modified by her intemperate habits, for these she continued to practice after her marriage with even less restraint than before.

During these attacks she screamed, talked incoherently, and threw herself about so violently as to require control, and she is said to have recovered from them after a few minutes, or at most a few hours, with no perceptible impairment of her intelligence. It also became apparent, not long after her marriage, that she was pregnant, to which fact we may justly attribute a portion of the general and violent nervous perturbation which she at this time suffered. This perturbation was manifested, as before stated, in an especial manner by the attacks, or spells, or fits, or paroxysms, as they are variously named by the witnesses, whose principal features I have already mentioned, and, except these, no alarming symptom occurred to her till about eight months after marriage, though the evidence is conclusive that she had, before this date, suffered many of the aforementioned attacks, and had more than once been on the verge of true delirium tremens. Either from the fear that some of those paroxysms might terminate fatally, or that her uncontrolled intemperance might induce disease which would suddenly terminate her life, or from some other fear or motive, her husband and her father-in-law, who were associated in business, went, unknown to her, some months after the marriage, to an attorney and requested him to draw up a will for her, at the same time giving him instructions as to its provisions. The will was accordingly prepared, and in such terms as to be almost exclusively in the interest of the two parties who had ordered it drawn. They took it, carried it home, and laid it away in a trunk, as the evidence shows. There is no evidence furnished to prove that the alleged testatrix ever read, or heard this paper read, except the declaration of the parties who caused the will to be drawn. It is from them alone that we hear that she even knew of the existence of this paper till almost the hour of her death.

Her husband, who, by its terms, was sole heir to her estate, alone says she approved it after reading it, and still months passed, and it was allowed to lie away in his trunk, unexecuted and unwitnessed.

Thus stood the affairs of this case when, on a Monday, this alleged testatrix exhibited signs of the approach of one of her accustomed ill turns, which, as already said, the evidence all goes to prove were the result of alcoholic excesses on a nervous system, rendered more susceptible by the pregnant state. On the following day, Tuesday, she was unusually ill, suffered a number of the paroxysms mentioned, and drank a considerably large amount of alcoholic liquor. She was still worse the following day, Wednesday, but apparently not too ill, in her husband's opinion, to render him incompetent to prescribe for her, though a physician had visited her both Tuesday and Wednesday. On Thursday morning she was so much worse that a second physician was called, who reached her about noon, and found her so seriously ill as to give him great solicitude. He found her suffering nausea and frequent vomiting, insatiable thirst, and a sense of burning at the stomach, great restlessness, getting out of and into bed, muttering, and often noisy delirium, with hallucinations of sight and hearing, though she would obey orders, and reply to simple questions, apparently rationally.

Even up to a very few hours before her death, which took place some eighteen hours after the above visit, when spoken to she would respond, and, so far as could be seen, rationally, but in a moment she would again relapse into wandering delirium. It also appears that, up to within a short time before her death, she was able to and did rise from her bed and walk about the room, a tendency her physicians say they tried to restrain, knowing that such efforts, in her exhausted condition, might suddenly destroy her life. There is no evidence I can find that she suffered any paroxysm to which the name of convulsion could be properly applied, during the last two or more days of her life.

A consultation, attended by three physicians, was had at

eight o'clock on Thursday evening, and resulted in the conclusion that, among the complications of the case, there was *uræmia*.

We are not, however, informed if there were any dropsical swellings, œdema of the lungs, or if there had been any headache, or even if the urine had been examined by the physicians in attendance. On the contrary, they state distinctly that they did not examine it, but one of them gave some of the urine to an outside party, who testifies that he examined it and found *purpurine*. It is frankly acknowledged by the attending physicians that, up to the hour of the consultation, they had not arrived at a definite diagnosis of the case, and, even after the diagnosis agreed upon at the consultation, there seems to have been much doubt as to its correctness; for, either to ascertain a cause of death, or to corroborate an opinion formed before death, an autopsy was held. In the meagre records of this *post-mortem* examination given us, nothing is said of any organ till the stomach is reached, and of this it is stated, that it was found somewhat congested, not much changed from health. It is said that the kidneys were both fatty and the liver extremely so. A dead foetus was found in the womb, and one witness ventures so far as to give his opinion that it had been dead about forty-eight hours. This was of course a very hazardous opinion, if we are to judge it in the light of the fact that there does not occur a particle of evidence that the condition of the foetus was even considered before the death of the mother. The only testimony I can find, which even alludes to the condition of the foetus before the death of the mother, or to the question of parturient pains, is an equally hazardous statement of one medical witness to the effect that, if the foetus had died three or four days before the mother's death, labor-pains would have come on earlier. Nothing is better known than the fact that a dead foetus may and often does remain in the womb for long and indefinite periods without the occurrence of labor-pains. It does not appear in evidence that the alleged testatrix in this case had labor-pains at all. However, the conclusion from the autopsy was, that death resulted from *uræmia*,

caused by Bright's disease of the kidneys, though no pathological record is offered in support of that *post-mortem* diagnosis, except the vague declaration that the kidneys were fatty, a condition often associated with fatty, light-colored livers in habitual drunkards, but not by any means necessarily accompanied with notable functional derangement of such kidneys. On the other hand, the whole history of the symptoms of the case, as detailed in the evidence, is quite inconsistent with this eleventh-hour *post-mortem* diagnosis. The medical witnesses agree that the condition of the blood known as uræmia, caused by disease of the kidneys, often produce paroxysms, variable in character, sometimes maniacal convulsions, and sometimes, instead, a gradually deepening state of coma. But, to account for the extraordinary and unprecedented fact that in this case the alleged uræmic paroxysms did not induce coma and abolish all sane consciousness, notwithstanding the case terminated fatally, one of the principal medical witnesses employs the following notable language applicable to the condition of the patient eight or nine hours before death: "It was concluded that she was suffering from uræmia, and it was a subject of remark that the case was exceptional, inasmuch as her mental operations were so clear; it is quite usual in a case of that kind that the contrary should be the case." As a support to this conclusion, one medical witness is reported as saying that he had seen many cases of Bright's disease of the kidneys, and that he had not found the mind generally affected. It is perhaps too much to expect of a judge, or of lawyers, that they should have deemed it important to ascertain if this witness had a tangible and reliable record of a case of Bright's disease of the kidneys, causing uræmic paroxysms in a woman far advanced in pregnancy, and yet which did not, at eight hours before the fatal termination, affect her mind.

I challenge the medical world to produce the record of such a case. If we exclude a few cases in which the pregnant woman, not even suspecting her imminent danger, is suddenly seized with uræmic eclampsia and her life destroyed in a few

hours, no case of uræmia terminates fatally in the pregnant women without seriously affecting the intellect many hours before death; in other words, fatal cases of uræmia in pregnant women always affect, more or less profoundly, the mental power.

The history of this case, and the pathological history of uræmic *eclampsia gravidarum*, fail to furnish the slightest grounds for the opinion that death was caused by uræmia. Had we even the usual local or general oedema attending Bright's disease, or its fibrine cylinders, and fatty, degenerate renal epithelium in the urine—which we have not—the symptoms of this case, as set forth in the evidence, would be conclusively against the theory of fatal uræmia.

The evidence certainly shows that, from Tuesday to after twelve o'clock Thursday night of the same week, this woman's condition was one of nervous agitation, insomnia, and finally of busy, muttering, and talkative delirium, from which she could be momentarily aroused by speaking to her—a condition rarely or never seen after the development of fatal uræmic eclampsia, and certainly never within twelve hours of the time of death.

Due regard for the well-known intelligence of the physicians in attendance and consultation forbids the conclusion that, even at the consultation on Thursday, nine hours before death, there were not very grave doubts as to how much of a part uræmia played in the production of the symptoms. Had there been no such doubts, the line of treatment, approved by the best authority, would have been (what it was not) purely obstetrical, and obstetrical counsel and means would have been resorted to, which was not the case, so far as the evidence goes. Now, as no such measures were taken, and, so far as the evidence goes, the uterus did not make the slightest spontaneous effort to expel the foetus, it is simply fair to conclude that the diagnosis of uræmia did not take very deep hold on the physicians of the alleged testatrix before her death. Had they adopted that diagnosis, they could hardly expect to be excused for abandoning the patient undelivered—as they did—some

five or six hours before her death. Then the practical failure of three intelligent physicians to decide that uræmic poisoning existed in this case during the fatal illness, as well as the symptoms attending the "spells" or "paroxysms" suffered during the last year of life, disproves the theory, which has only the support of a most imperfect and unscientific *post-mortem* examination. Like too many *post-mortem* conclusions where toxic agents have destroyed life, this examination, according to all the evidence, was totally fruitless of truthful results. It did not demonstrate the cause of death.

Having discussed the improbability, if not impossibility, that uræmic poisoning was the cause of death in the case, I will now inquire into the other possible causes of that event.

If the testimony is correct—and it is so abundant both on the part of her medical attendants and others, and so corroborative one of the other, as to be convincing—the attacks from which she suffered during most of her married life, called "spells of fainting," or "spasms," by the witnesses, are very accurately described in most essays on hysteria. The testimony does not inform us whether the alleged testatrix had these paroxysms or fits before she became pregnant. This, however, is not to be regarded as of importance, it being a well-known fact that it is common for women to suffer this, and other forms of nervous attacks, for the first time, after becoming pregnant. There was, however, in this case an especial cause for these nervous attacks, a cause which fortunately is not very frequent among our young and recently-married women. I allude to the excessive use of alcohol. It is a fact, well understood by persons conversant with the subject, that habitual inebriety is a fruitful cause of hysterical attacks in women who have no hysteria when sober. On this account, alcoholic hysteria is regarded as distinct a form of this neurosis, as alcoholic epilepsy. There is, besides, very conclusive evidence in the case, that this woman had often, during her married life, suffered other results of the excessive use of alcohol than fits of hysteria. By his frequent experience with the attacks, or fits, or paroxysms, of alcoholic hys-

teria, if not delirium, suffered by his wife, it appears the husband had found out the value of laudanum. It is distinctly declared, by as respectable a witness as the case furnishes, that, by order of the husband, she bought ten cents' worth of laudanum for the deceased on Wednesday before her death. It is not proved that she did not take it, and the attending physician contradicts the husband's statement that it was ordered by the physician.

The apothecary who sold this laudanum says that the amount equals twelve doses of opium for the adult, or from twelve to eighteen grains. There is no reliable evidence to disprove that, whatever the physician may have ordered, she took, in addition, this twelve to eighteen grains of opium and an indefinite amount of alcohol during Wednesday and part of Thursday.

Now, if the husband had not regarded himself as skilled in the management of the wife's attacks, whatever they may have been—and nothing but experience or special education could have created that self-confidence—he must be regarded as careless, or daring, or criminal, for having assumed to administer a potent drug on his own responsibility; for one of the physicians in attendance swears that, on the morning after this laudanum was purchased, and probably given, he and a neighboring physician found the patient in so critical a condition as to induce them to seek counsel. Taking the most generous view of the facts, in behalf of the husband, we must suppose that his experience with laudanum in her accustomed attacks had given him so much confidence in its efficacy that he was unprepared to appreciate the graver symptoms of her final attack. He probably was unaware of the immediate danger; having seen her recover from so many spells, he presumed she would from this one.

This is the most liberal interpretation of his behavior. But, returning to her symptoms, we find them enumerated as follows:

Much nervous and muscular agitation, restlessness, and insomnia; vomiting and insatiable thirst, with a burning pain

at the stomach: hallucination of sight and of hearing; muttering and talkative delirium, calling the names of persons absent or dead, and yet replying promptly to questions; obeying the requests of the physicians, and in a moment forgetting them; and finally her ability to walk about the room till near the hour of her dissolution.

It would appear that few experienced medical men could mistake the significance of that array of symptoms, especially when occurring in a person of the admitted habits of this alleged testatrix. The following lines from the great master of clinical description, Dr. Thomas Watson, most aptly and fully hit the symptoms presented by this case:

“If you question the patient about his disease, he answers quite to the purpose; describes in an agitated manner his feelings, puts out his tongue, and does whatever you bid him; but immediately afterward he is wandering from the scenes around him to some other that exists only in his imagination. Generally his thoughts appear to be distressful and anxious; he is giving orders that relate to his business to persons who are absent, or he is devising plans to escape from some imaginary enemy; he fancies that rats, flies, mice, reptiles, or other objects, are running over his bed, or that strangers are in his room. He rises to look suspiciously about the room, or to leave his bed, but is readily induced to lie down again.

“Upon inquiring into the history of the patient, in a large majority of instances you will find that he has been an habitual drunkard, and very frequently that from some reason or other this habitual stimulus has been diminished or taken away. Sometimes, however, it comes on in those who are perpetually fuddled, even though they have not intermitted their usual indulgence in drink.”—(“Practice of Medicine.”)

The burning pain at the stomach, vomiting, and thirst, which were so marked symptoms in this case, are often absent in alcoholic delirium. But as relates to the mental phenomena, Dr. Watson's general description of delirium tremens comes wonderfully near to meeting every symptom shown by this alleged testatrix during her last illness.

It will be very difficult, if not impossible, to account for her symptoms upon any other supposition than that they resulted from alcoholic poisoning. If that cause be admitted, it is very manifest that she was quite *non compos mentis* for at least two days preceding her death. All her declarations, expressed wishes, as respected persons and business, after Wednesday morning, were in all probability mere ravings, and totally unreliable. Among those declarations should probably be placed, that her husband had injured her by striking her in the abdomen, causing a black-and-blue stain. Though two female witnesses testify to this declaration, and to having seen the bruised spot, it is not by any means improbable that they themselves asked her if the bruise had not been made by the husband, to which she answered "Yes." Persons under this state of mental derangement need only the suggestion to charge anybody with any act.

The husband denies that the declaration has any foundation, and he is, under the circumstances, by far the more reliable.

The cautious testimony of the physician, who saw her between eleven and twelve o'clock Thursday night, is in all probability the most favorable representation that could be made of her intellectual condition. He declares, under oath, that she was not, in his opinion, able to fix her mind long enough upon any one subject to dictate any article in writing.

It is in evidence, however, that she would reply to questions promptly, and apparently rationally, and would do, so far as she could, anything her physician or friends desired her to. We have seen that such a condition is very far from indicating rationality. In certain states of alcoholic delirium responses to all manner of questions are obtained. Whether asked if they wished to die, or wished a drink, such persons are very liable to give the same reply—"Yes," or "No;" and the same if asked if they wished to see a priest or physician. It may, hence, be readily comprehended how the subject of such a condition of mind may be brought to

reply "Yes," to any number of questions relative to the distribution of property by will ; or how, if requested to sign a paper, he would at least make an effort to do so, though it might result in a complete bungle.

This power to respond, and this readiness to obey commands, are terminated sometimes very suddenly by the occurrence of death after some extra effort. In other cases, both the physical and mental power fail gradually, and life does not become extinct till some hours after response and volition have failed. So far as the testimony instructs us, this impossibility of obeying requests, and of intelligent response, was reached in the case of this alleged testatrix about 12 o'clock on Thursday night, and she died about five hours after. It appears that, between 11 and 12 o'clock, having been asked if she would sign a will, she said "Yes ;" the arrangements were at once made, she was held in a reclining position, a pen was put into her hand, the place of signature pointed out, and she was requested to sign, which she did in a very imperfect manner. This having been accomplished, it appears in evidence that either she, or some other party, conceived the idea of adding a codicil. What conscious part she had to do with said codicil may be fairly inferred, from the fact that, after responding to some half-dozen lines, of which it consists, she was too near dead to make it practicable to get her signature to it. She died, so far as can be gathered from the testimony, from four to five hours after this effort with the codicil, and died of asthenia. If it be admitted that she was suffering from alcoholic excesses, and that the cause of her death was even only in part of that character, not only the story of her symptoms, but the whole history of the influence of alcoholic poisoning on the intellect, and the accumulated clinical history of alcoholic delirium, go to confirm the opinion that this alleged testatrix had *no conscious appreciation of what she did or said for at least twenty, and probably seventy, hours before death.*

If, however, we admit that there was a uræmic complication, or that uræmia was the chief cause of death, we encounter

another unpleasant yet important fact in the case. On Wednesday, the day before the fatal symptoms came on, the ten cents' worth of laudanum was bought and probably administered. Now, it is a recognized fact that the administration of opiates in uræmia is dangerous practice in ever so skilled a hand; and hence, if that were her condition, the result of that medication, on the husband's own responsibility, may have been disastrous, and will now, of course, never be known. It is just to the husband, however, to say that the symptoms on the following day, as described by the witnesses, all contradict the theory that she suffered from uræmia, or that, if she so suffered, she took laudanum on Wednesday.

But it is possible, however unprecedented it may be, for uræmia to be manifested in a rare form in this respect.

There are two points in the case about which the medical testimony and the lay testimony are positive: one is, that the deceased was unable to finish her last will and testament; the other is, that she died of some blood-poisoning, either uræmic or alcoholic, or possibly choleric. The only known circumstance in which the intellect of a person, fatally poisoned with urea, is sound and disposing a few hours before death, occurs, as I have before said, in those cases where uræmic convulsions come on with little antecedent disturbance, and destroy life suddenly. This was not the case with this alleged testatrix, and, therefore, the idea that she died of uræmia, without convulsions, yet was of sound mind five hours before death, is quite untenable. The same law applies to the choleric or bile poison. On the other hand, if we accept the theory that her vitality gave way under the destructive effects of alcohol, she had no intellect, in all reasonable probability, for a day or two before death. In either case we are without the slightest reason that this alleged testatrix had even an approach to a sound and disposing mind and memory after eight o'clock on the Thursday in question.

As this case would lose much of its instructive and practi-

cal features if some of the legal history of it were omitted, we will occupy a little time on it:

As has been stated, there is no evidence, except from the principal heir, that the alleged testatrix knew anything about the contents of the proposed will. There is no evidence that it was read to her at the time she made the blundering effort to sign it. On the contrary, it is stated that it was not read. The parties solely interested in it either dictated it or witnessed it, or both; the husband, the father-in-law, and the brother-in-law, doing all these offices, and were all associated in business. The unsuccessful attempt to add a codicil was a most trifling matter pecuniarily, the whole amount thereby diverted being but a few hundred dollars.

The court before whom the case was heard, decided that the decedent was at the time she signed the paper of sound and disposing mind, and gets over the fact that the parties solely benefited by it should have had all to do with its dictation, and even with witnessing it, in the following way: "However indelicate or impolitic it may have been for the proponent to have persons so nearly related to him, as the subscribing witnesses to the will of his wife, yet they were not disqualified, and I can find no reason in law why their testimony should be discredited, unless there should be other testimony and circumstances than have been presented in this case to weigh against their credibility."

Had the testatrix and proponents of this alleged will been, during the last day of her life, isolated from mankind, in the midst of some desert, or on some rock in the sea, there would be some reason for this attempt of the court to present an excuse for the fact, that the parties witnessing it were closely related to the principal heir, and known to have been indirectly largely benefited by it; but when it is known that these witnesses affixed their signatures to it in the heart of a large city, and at an hour of the day when neighbors, notaries and lawyers are at their residences, and easily obtained, he will find it difficult to offer any laudable or legitimate reason for that "impolitic" irregularity.

It is often very useful to take different views of pictures as well as courts. The uncertainties of the law are thereby often shown to be quite as great as those said to be proverbial of medicine.

The same court which issued the above opinion, also, not very far from the same time, issued and subscribed to the following :

“The law is very zealous against straining after probate when the preparation of a will is made by a party interested, to be executed by a person of doubtful capacity, and requires that, to support such probate, there must be *strong proof of intention outside of the interested party*, who claims to have acted under instructions.”

“The court must take a cautious view in deciding questions of law and fact. It is an established principle that, where capacity is *doubtful at the time of execution*, there must be proof of instructions or of *reading over*. A man in a languid, torpid state may easily acquiesce in signing his name to a will set before him, more especially when he knows that there is something in the paper which he wishes to take effect ; the presumption also is strong against an act done by the agency of the party benefited ; the act is not actually defeated, as it was by the civil law, *provided the intention can be fairly deduced from other circumstances*. Though the court will not impute fraud, it will require *strong proof of intention*.

There is no positive or even circumstantial proof that there was any intention on the part of the alleged testatrix to give all her property to her husband. In addition to what has been said in relation to the signing of the alleged will, it may be interesting to further quote from this same court as to the mere signing of a will being an index of the state of soundness of the mind of a testator. In the same opinion above quoted from, it is said :

“The power to affix a signature to a will, or even to sign checks, does not prove sanity so far as the law requires to perform such a solemn act as the making of a last will and

testament They may be merely automatic acts." Such unquestionably was the act of signing the alleged will in this case. The admitting of this will to probate was very clearly a "strain" in violation of all approved rulings, and of previous opinions of the same court.

Courts have the power to give opinions, and the people have a right to decide if those opinions are consistent with common sense and previous rulings, and physicians have an occasional right to say if those rulings are sustained by pathological facts.

THE CRIMINAL USE
OF
PROPRIETARY OR ADVERTISED NOSTRUMS.*

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MR. PRESIDENT: In compliance with your kind invitation, I have the honor to submit the following paper :*

In a series of papers read before the Gynæcological Society of Boston, upon the "Detection of Criminal Abortion," I alluded briefly to the criminal use of proprietary or advertised nostrums.† In a more extended notice of the criminal use of these nostrums, I endeavored to arrive at facts regarding the sale of these nostrums in the United States.‡ Until I became interested in the study of this branch of legal medicine, I was not aware of the difficulties in the way of collecting figures upon this subject. Such are the difficulties, however, and such the sources of error, that I do not deem the table, published in the monograph referred to, of sufficient authority to transcribe here. The sale of these dangerous preparations is enormous, so far as I am able to form a conclusion. The sale is increas-

* Read before the New York Medico-Legal Society, June 13, 1872.

† *Journal of the Gynæcological Society of Boston*, December, 1871, p. 350.

‡ "Detection of Criminal Abortion and the Study of Fœticial Drugs," pp. 41. 8 vo. James Campbell, Boston, 1872.

ing. Every facility is afforded for the ready sale of these drugs. The daily press accepts the advertisements of the proprietors of these articles, and such are the profits arising from the sales that they are able to purchase the most prominent and expensive places in the papers for the pernicious notices. It is not uncommon to find their notices published in the advertising department of what are regarded as first-class magazines. And, to the shame of the religious community be it written, it is very common to find these advertisements occupying prominent places in so-called religious journals. Every school-girl knows the meaning and intent of these advertisements. Nor is this the worst: almost every woman believes in the power of advertised pills or drops to accomplish the end for which they are recommended. These wares are unblushingly exposed for sale on the shelves of drug-stores, and are as boldly asked for.

Here is a trade which, without stretching a single existing law, may be called illegal and illicit, carried on in open daylight, in the full knowledge of this newspaper-reading public. It is almost impossible to say that women make a misapplication of the wording of these advertisements. An able and intelligent editor once said to me that they carefully excluded all advertisements which seemed to be of a criminal nature. As the term "female irregularity" is invariably interpreted, it means that a woman is irregular when her courses fail to appear, no matter what the cause of the interruption; and thus all "irregularities" being removed, as advertised by these nostrums, these advertisements never fail of being as direct a bid for the attention of the pregnant woman, as those advertisements are which embody a caution for the lady in a "delicate situation" not to use them. Notices containing such direct insinuations are not taken now by respectable journals, so, at least, editors tell me. The advertising departments of a daily paper are never edited. The success of every paper in the land is measured by its advertising patronage. Advertising notices are received and published by men occupying mere clerical positions, and in a

pernicious advertisement is rarely detected until after it is published, and the paper comes under the eyes of a critical reader, or editor-in-chief.

I leave it to members of the Society, better qualified to say, whether this class of advertisements are amenable to existing laws or not. It is an axiom among business-men, that advertising is the life of business, and surely advertising is the life of this trade. Take away from the makers of these demoralizing compounds their facilities for reaching the public notice, and their wares will not be on the shelves of the retail druggist. This prostitution of the great lever of public education and progress is a sacrilege which demands immediate atonement. Upon the shoulders of the law-makers rest many sins of the law-breakers. If, through want of wholesome laws, or defects in existing statutes, an article which has a malignant influence upon the morals of the community is openly sold, it is sure to find criminal purchasers. In view of the extent of this trade, I am forced to believe that in relation to this crime there exists a moral obliquity in all ranks of native-born society. Now, an ordinance for the suppression or punishment of an offence against society is enacted on the assumption that there exists in every community a certain proportion of law-abiding people. If, in its relation to any given offence, this assumption is false—and in relation to this crime I fear it is—the law is simply an array of words powerless to effect its purpose. In the law which I shall propose for the consideration of the Medico-Legal Society, I shall endeavor to arrest this trade, and vast numbers of criminal abortions, which directly result from it, by the application of the suppressing force of the law to the fountain-head of the evil. The attempt to enforce such a law would test the strength of the law-abiding element in the community, or, in other words, the morality of the people.

The question naturally arises, to what extent is the use of the compounds under consideration, followed by abortion, either criminal or innocent. Considering the vast importance

of human gestation, there is no other function so entirely at the mercy of circumstances hostile to its completion. The theory, taught by Taylor and other writers on medical jurisprudence, that abortion from medication is rarely successful, and, when it is so, the mother's safety is seriously affected, is, in my opinion, wrong. There seems to be much evidence, however, that an abortion induced medically is more liable to be followed by fatal results than one procured by instrumental interference. This statement may be proved by the current criminal items of the daily newspapers. I have been some time in collecting twenty-one cases of death from criminal abortion from various newspapers. Of this number, ten deaths resulted from abortions from medication, five cases implicated medical men, and in six cases no statement was made of the means used. Rejecting those notices of fatal abortions implicating medical men, as very probably induced by means other than the administration of drugs, we have a large majority left in which it was stated drugs were used.

The chief source of danger lies not in the abortion, but in the use of drugs, which are of themselves fatal poisons. Savin, tansy, and rue, are examples of drugs which, even when taken with care, are liable to jeopardize the woman's life, without disturbing the contents of the womb. These drugs may also be named as potent abortifacients when their use is persevered in with small doses.

A large class of women are very confidential with their medical adviser. From these women I have learned of numerous undoubted ovular abortions following the use of advertised nostrums—cases in which, after a menstrual lapse of one or two months, there was a profuse discharge of blood with clots, attended with expulsive pains, and from the woman's description it was presumably an abortion.

I know many married women who have gone years without the birth of mature children, who resort habitually to some one of the many advertised nostrums with as much confidence of "coming around" as if they repaired to the shop of the professional abortionist. I could detail several

cases of this kind, if absolute proof of the dangerous nature of these compounds were necessary. I think but few medical men would be inclined to deny any power, as abortifacients, to these mixtures. It must be borne in mind that, when these compounds are used with criminal intent, they are resorted to in a desperate emergency, and with a reckless disregard for personal safety. Under these circumstances, any thoroughly purgative drug might prove an efficient abortifacient; persistence in the use and excess in the dose being the conditions necessary. I have already reported a case, in that portion of my monograph on foeticidal drugs, in which an infusion of "pink and senna" terminated a pregnancy some months advanced. In this case, an excessive use of a mixture not deemed foeticidal gave it criminal potency.

In the morbid anxiety for relief from their unpleasant burden, many women take enormous doses of these mixtures. One case came to my knowledge, in which a young woman took repeatedly doses of fifteen pills of the kind called "Sir James Clark's," in her desperate anxiety. The only result was hypercatharsis and extreme prostration, and months after her health was not restored. In this case no pregnancy existed. It is in this tendency to overdose, rather than underdose, that the chief power of these mixtures, as foeticidal agents, lies. Although a great variety of form exists in the manufacture of these compounds, yet they can be conveniently grouped in two classes, the fluid and the solid pill form. This division governs, in a great measure their potency. Many of the potent foeticidal agents are not used with advantage in pill-form. The oils of savin, tansy and rue are not available in that form. Aloes, hellebore, powdered savin, ergot, iron, solid extracts of tansy and rue, so far as I am able to form an opinion—and I have studied the subject quite carefully—are the main ingredients in pill form. It will be evident, from this statement, that a great difference exists as to the mode of action, and the extent of danger between the two groups. One specimen of an extensively-advertised mixture of what is

known as "periodical drops" was given me by a married lady who had taken two teaspoonfuls, and was obliged to desist because of its irritating effects upon the stomach. This sample appeared to be composed of some fluid extract, upon the surface of which floated about three drachms of oil-globules, of a light-orange color, with the odor and taste of savin. The bottle was a thin panel of two ounces and three drachms' capacity. The dose was from three to four teaspoonfuls a day. I deem this mixture highly dangerous. It is evident that, if care was not taken to shake the bottle, an overdose of the powerful oil floating upon the surface of the mixture might easily be taken. Another preparation, also well known, and of which there are extensive sales, is composed mainly of oils dissolved in alcohol, and in which a futile attempt is made to mask the odor and color of oil of tansy by wintergreen and coloring-matter. While these two are the most dangerous of the many mixtures I have seen, there are others which are simply inert. These nostrums in the form of pills, when taken by myself in the dose directed in the printed labels, gave no results either upon bowels or circulation. How many more of the scores of these nostrums, which have been advertised and sold for the purpose of correcting "female irregularities," are pure humbugs, in their composition, it is impossible to say. The term "humbug" here must be used in an extenuating sense; for the fact that these inert mixtures are sold to those with a criminal intent and are purposely made innocuous, is, strange to say, an evidence of honesty not yet wholly destroyed. If the question is asked to what extent the use of these advertised preparations is actually dangerous to life, I must say that, so far as my observation goes, all of them examined by me, with the exception of the two already mentioned, are free from any direct poisonous action upon the human system. But their effects upon the health are most disastrous. Hæmorrhoids, nervous prostration, debility, a persistent gastric and intestinal irritation, and irritation of the bladder, are results which I believe uniformly follow their criminal use. A crim-

inal use implies a persistence in the use which inevitably leads to functional derangement.

It is important that the physician should become acquainted with the appearance and method of putting up for the trade these periodical pills and mixtures. Their appearance is characteristic, being the result of an apparent attempt to conceal the nature of the contents of the bottle or box when in use. Thus they are put up in small and partially-opaque glass bottles, in square or in small cylindrical tin boxes, or in very small thin pasteboard boxes, and quite generally having no label pasted directly upon the box, the name and directions being upon a printed wrapper.

I have experimented upon myself with eleven varieties of these nostrums, taken in the dose directed upon the wrapper of each. Two of these were the fluid mixtures before mentioned. The mixture (*a*) caused an uncomfortable feeling of warmth in the stomach, a fullness in the temporal region, frequent desire to urinate, a feeling of weight and oppression at the stomach, loss of appetite, and a high-colored urine, with a strong savin-odor. When pushed to the maximum dose named upon the printed wrapper, the face flushed painfully, the pulse beat with great force, not increased in frequency, other symptoms as above detailed. The fact that the rapidity of the heart's action was not increased, notwithstanding the evident presence of an arterial stimulant, led me to suspect the presence of ergot in large amount. The mixture (*b*) gave the same symptoms, with the addition of pain in the stomach and bowels, and a great amount of flatulence. The urine was voided frequently, and gave a strong aromatic odor resembling that of tansy. The face was not flushed, but there was an uncomfortable feeling in the head, with the pressure-pain which seems to be common to both the oils of savin and tansy. These symptoms were more persistent than in the experiment with the mixture (*a*). My reason for regarding both of these mixtures dangerous I believe to be well founded.

Four samples of pills (*c*), (*d*), (*e*), (*f*), when taken in the

dose directed in the printed instructions, gave the following result: After one or two doses a marked cathartic action upon the bowels. The evacuations had a marked aloetic odor. The urine became scanty and high-colored. The cathartic effect was persistent. Flatulence and heat in the stomach and along the track of the colon. When used in the maximum dose, as directed in one sample (*d*), there were tenesmus and a sense of heat at the anus, the feeling of warmth in the track of the colon more marked, and a sense of uneasiness (fullness) of the right side. The aloetic odor not more marked in the evacuations than in samples (*e*) and (*f*). Samples of pills (*g*), (*i*), (*j*), in the minimum doses simply induced a lax condition of the bowels, with no marked peculiarity. In the maximum doses the laxative action became more decidedly cathartic. In these three experiments I was unable to detect any difference between them and a mild cathartic pill. Samples (*h*) and (*k*), taken in either the minimum or maximum doses, produced no effect whatever, and evidently were perfectly inert.

The experiments, briefly detailed above, extended over a period of about six months. The detection of their criminal use would require that the nostrum be used in its largest dose, which must be persevered in for some time before an abortion would be induced. I believe this to be an imperative condition of their use as successful abortifacients. Samples (*g*), (*i*), (*j*), I regard as humbugs, and would not cause an abortion, unless used by women very liable to external and mental influences. If the patient were to be examined by a physician as to the condition of the bowels previous to an abortion, it possibly may be said that the patient had a diarrhœa. If the criminal use of the nostrum extended over a lengthened period, and the purgative element in the mixture proved to be aloes, she would fail to have the pale, wan look of the face which attends an active diarrhœa. Another point of great importance, in the detection of the criminal use of these nostrums which contain an aloetic or other cathartic, is a periodical laxity of the bowels, from the

constant tendency of the bowels to constipate after the overstimulation by the purgative, and being spurred into action by a repetition of the cathartic dose. This periodicity of the cathartic action would distinguish it from an intended fraud, as chronic diarrhoea. The griping, borborygmus, tenesmus, and, when the use of the nostrum had been long continued in the maximum dose, vomiting also, would intermit the period of the accession of the symptoms corresponding to the renewal of the cathartic dose. When, in the case of a woman in whom we suspect a pregnancy, we have added to the above back-ache, bearing-down, and ovarian pain, showing that the pelvic nerves and vessels have become responsive to the persistent irritation of the cathartic, we have marked evidence of the criminal use of a cathartic nostrum.

This is well illustrated by the following case, kindly furnished by my friend Dr. Frank H. Butler, of this city: Miss Blank, a spare, broken-down woman, aged about thirty-four years, and a confirmed morphine-eater, took one pill of a variety covered by gold foil, contained in a small paper box, the dose being one pill. She first felt a cramping in the stomach, which lasted all night, beginning seven hours after the dose, and lasting until the next day. With this was very active movement of the bowels from noon until the morning of the following day, getting up eight or ten times during the night. The evacuations were watery and of a dark color. There was no tenesmus. There was pain in the back while having the cramps and diarrhoea. I have known these pills to be taken by several women, and each one gave the same history of the effects produced. I regard this preparation, if not positively dangerous to the maternal life, as one which seriously threatens the foetal life. To show the inclination of women to use this nostrum criminally, it is only necessary to say that the sales of these pills are very large. From the severity of their action, and the nausea and vomiting which very often follow their use, I am inclined to believe that the active ingredient is black hellebore. The throat is often dry, and the face has a blanched appearance. The detection

of the use of these nostrums will depend on the nature of the compound. Some one active ingredient generally has a leading place in the mixture. This rule holds good with the fluid as well as the solid mixtures. When iron in some form is added to the nostrum, as it often is, through a mistaken notion of the action of iron as an emmenagogue, it is certainly inert as an abortifacient. The drug most commonly placed in such a combination is aloes, and it is, therefore, important that we understand the peculiar train of symptoms which characterize the use of the drug. Aloes is an anomaly among evacuants. Its action is stimulant to the circulation, rather than depletory. This is indicated by increased heat of surface and quickened pulse. The evidence of this action is also present in the large intestines, as a sensation of heat and fullness along the track of the colon. The urine is scanty and high-colored. The face is inclined to flush, not to blanch and shrink, as in the case of the drastic or hydragogue cathartics. There are often transient shooting-pains and tenderness, with a sensation of heat and fulness over the region of the liver.

There is also local evidence of its criminal use. One of the prominent symptoms is the torturing tenesmus. This symptom would imply its persistent use. There are pains in the back, heat and fulness in the rectum and anus. There is sometimes a frequent desire to urinate, seemingly dependent upon reflex strangury. A symptom always present is the marked and peculiar odor of the aloetic dejection. Unless great precautions are taken as regards ventilation and cleanliness, the strong odor of the stools will linger in an apartment many hours. This retention of the aloetic odor is more marked in the case of small bedrooms, whose walls are hung round with wearing apparel, the fabrics holding the effluvium.

Another drug, highly active as an abortifacient, and, I believe, existing in several advertised nostrums, is black hellebore, and a word as to the peculiar evidences of its administration may be in place. Small doses would cause increased peristaltic action of the intestines, quite generally followed by

heat and a sense of fullness of the pelvic vessels. When used in larger doses, there are repeated painful fluid motions, almost always vomiting, tenesmus, heat through the hips, and bearing down. When any nostrum, composed largely of hellebore, is used to excess, such use would be indicated by pain and pricking in the tongue, fauces and throat. There may be a painful sense of constriction and strangury of the throat, pain at the epigastrium, and vomiting. The extremities may be cold, and the surface bedewed with a cold, clammy sweat. The pulse is often at fifty, and a case is recorded in which it was as low as thirty beats in a minute.

Savin in powder may be present in some of these nostrums in pill-form, but I cannot speak from knowledge. I know, however, that it frequently enters into the composition of the counter-prescriptions of druggists. The oils of savin and tansy are, I am sure, present in the fluid preparations. As the symptoms attending their criminal use are practically identical, they may be grouped together. The odor of the drugs will be present in the breath and urine. Severe headache, flushed cheeks and nausea, and especially the pressure-like pain in the temporal region, would be a very usual complication of symptoms, and, as such, ought to direct our attention to the possibility of the criminal use of these drugs. If the use of the drug (savin) is pushed to its cathartic action, the pain and flatulence and a peculiar burning pain at the anus, frequent micturition, with or without strangury; and, if we add to this the presence of the odor of the drug, we have almost positive proof of its use. Tansy adds to the symptoms, common to both the drugs, a train of phenomena which results from its peculiar action on the nervous system. Its nervous power selects the spinal cord as the field of its primary action. In nervous females small doses may cause convulsions; or, if not such a marked impression, numbness, or pricking of the extremities, may be present. Small doses may also dilate the pupils, or render them immobile. Profuse salivation has been noticed as a symptom of its use. It will be unnecessary to say anything about the application of

these symptoms to a case of suspected criminal use of proprietary nostrums. The fact of a suspected or pending abortion concurrent with the above symptoms ought to lead us to make a careful inquiry.

There is yet another class of advertised nostrums which deserve notice. Two samples of pills which I have examined contained, in the printed directions for their use, the instruction that tansy-tea be drunk morning and night. This is surely a very dangerous direction, and the criminal intent of the proprietor is evident. So far as I am able to judge, both the samples were inert, the maker apparently designing to make up for the deficiency in power inseparable from the pill form of these nostrums as a foeticidal agent, by advising the concurrent use of a potent drug. In the use of this class of nostrums, it is very probable that the would attribute any abortion which might result, to the use of the pills, as the tansy-tea is given a secondary place in the directions. In one case which came to my knowledge from the woman herself, she was made very sick from the use of the tansy-tea and was obliged to send for her family physician. The pills caused no appreciable effect.

The law passed in 1868, to check the sale of obscene publications and prints, relates also to obscene advertisements of patent medicines; but would not prevent the publication of advertisements of nostrums calculated to correct "female irregularities," as these advertisements are carefully worded, and could in no sense be called obscene. Yet a trade is permitted in a class of nostrums the very advertisement of which, no matter how carefully and delicately worded, must have a very injurious effect upon the minds of both sexes. One of the most dangerous of these moral effects is the result of the open manner in which the sale of these nostrums is carried on, and the character of the magazines and newspapers which publish the advertisements. To suppress the advertisement, either in newspapers, or by circulars or hand-bills, of any drug or mixture which is claimed to act as an emmenagogue, or to correct menstrual irregularity, of what-

ever name or nature, must be as legitimate a matter for corrective legislation as the liquor traffic, or any other evil, the suppression of which is deemed for the good of society.

In offering, therefore, for the consideration of the Medico-Legal Society, an amendment to the law of 1868, I do so with great diffidence as to the legal part of the remedy, but not with lessened faith that the enactment of such an amendment and its rigid enforcement, would be a lasting measure for the correction of public morality.

Draft of an Amendment to Chapter 430 of the Laws of 1868.

AN ACT to amend an Act entitled "An Act for the suppression of the trade in and circulation of obscene literature, illustrations, advertisements, and articles of indecent or immoral use, and obscene advertisements of patent medicines."

SECTION 1. Section 1 of said Act shall be amended so as to read as follows:

If any person shall sell, or offer to sell, or shall give away or offer to give away, any, or have in his or her possession with intent to sell or give away, any obscene and indecent book, pamphlet, paper, drawing, lithograph, engraving, daguerreotype, photograph, stereoscope, picture, model, cast, instrument, or article of indecent or immoral use, or article or medicine for the prevention of conception or procuring of abortion, *or medicine or nostrum of any kind whatsoever, known as periodical pills, drops, or mixtures of any name or nature, for the regulation of the menstrual function, or female irregularities, or is claimed to act as an emmenagogue to relieve suppressed or interrupted menses caused by pregnancy or not,** or shall advertise the same for sale, or write or cause to be written, or print or cause to be printed, any circular, hand-bill, card, book, pamphlet, advertisement, or notice of any kind, stating when, how, or of whom, or by what means, any of the said indecent and obscene articles and things hereinbefore mentioned,

* The proposed amendment is in italics.

can be purchased or otherwise obtained, or shall manufacture, draw, and expose, or draw with intent to sell, or to have sold, or print any such articles, every such person shall, on conviction thereof, be imprisoned in the county jail not more than one year, or be fined not more than one thousand dollars, for each offence, one-third of said fine to be paid to the informer upon whose evidence the person so offending shall be convicted, one-third to the school fund of the county in which such offence shall be committed, and the remaining third to the treasurer of the Female Guardian Society in the city and county of New York, if the conviction is in the said city and county, to be by said treasurer applied to the uses and purposes of said society, as set forth in their charter or act of incorporation; and if the conviction is in any other county of this State, then said remaining third shall be paid to the treasurer of the orphan asylum in said county, if there be one, or in equal portions to all of said asylums, if there be more than one, to be applied to the purposes of said asylum or asylums; and if there be none, to the superintendent of the poor of said county, to be applied to the benefit of the poor of said county.

SEC. 2. This Act shall take effect immediately.

It must have great moral force to suppress by legal enactment a trade which has been allowed to attain great proportions, and which from force of habit, people have come to regard as legitimate. Quetelet, who has generalized with the phenomena of human passion, and has elevated the emotional of our natures to the dignity of an inductive science, embodied in a maxim, that society prepares the crime and the criminal executes it. This crime of the period seems to be a remarkable example of the truth of this. It has its roots in that outgrowth from the purely human in our natures called society. If the same principle which underlies crime in the aggregate, applies to the crime of abortion, some law, like the proposed amendment, which is purely correctional, but also from the nature of its prohibition contains the elements of moral education, ought to be adopted.

EPILEPSY AND ITS RELATIONS TO INSANITY,

AND CASES OF DOUBTFUL RESPONSIBILITY BEFORE JUDICIAL TRIBUNALS, ETC.*

BY A. O. KELLOG, M. D.

THERE are no cases of greater interest, either to the psychologist, the medical jurist, or the ordinary philosophical observer, than those obscure, irregular, and often singularly-manifested forms of insanity which complicate or are associated with epilepsy—none that have given rise to more dispute before courts of justice, or lead to more erroneous charges and decisions on the part of judges and juries. Touching the responsibility of many of these obscure cases before the law, there have been and are now, and, until they are better understood, will continue to be, wide diversities of opinion. So contradictory is sometimes the evidence of medical men and “*experts*,” and so divergent their views touching the same phenomena, indeed, we are sorry to say, so *ex parte* is sometimes their evidence, leaning manifestly toward the side of those who called and paid them, that we have been ready to blush for the calling to which we belong, and have entertained the desire to leave the whole subject to the learning of the judge and the common-sense of the jury. A moment’s reflection, however, and the recollection of decisions that have been made heretofore, teach us that this would be to render confusion still more confounded; and, if a correct decision is arrived at under such circumstances, it would be

* Read September 12, 1872.

more the result of a happy accident than of any logical deduction from the facts and phenomena educed.

The great difficulty and obscurity which surround and complicate such cases have not, we are pained to say, called forth that good-will, that forbearance, and Christian charity which "thinketh no evil," on the part of either of the learned professions concerned in the investigation, which it would be desirable to see, and hence those gladiatorial displays of intellectuality sometimes witnessed in courts of justice, repugnant alike to good taste and kindly feeling, if not subversive of justice. These combatants have sometimes appeared to us like those theologians satirized by Butler in his "Hudibras," who sought "to prove their doctrine orthodox by apostolic blows and knocks"—with this difference, however, that the "blows and knocks" were in most instances neither apostolic nor scientific, witty nor wise.

It has sometimes appeared to us that even if the history of our jurisprudence, during the last decade or more, is well and faithfully written it will look very strange to our successors of fifty or one hundred years hence.

That portion of it which relates to the jurisprudence of insanity will certainly be rich in the extreme to them, and call up smiles and blushes, if not tears.

Our successors will no doubt be moved by the same feelings with which we now regard the trials for witchcraft, and will say of us as we now say of our ancestors, "There were strange men in those days, and strange delusions sought after." There will be this wide difference, however, between us and them, which, to point out even at this time, needs no special prophetic power, viz., that with them, with all their ignorant superstition and cruel bigotry, there was an element of honesty, and as grim a determination to do justice to offenders as they understood it, as there is with us to undo it. At all events, the length of the prisoner's purse never determined, as sometimes with us, the question as to whether he was whipped or unwhipped of justice. Let us look at ourselves in connection with this subject for a moment, for it may be profitable at

least to make the attempt to see ourselves as we may appear when the light of history comes to be cast upon us. As we do this, our minds, like that of the justice in "As You Like It," if not filled with "wise saws," will certainly be with "modern instances"

A fearful crime is committed by a poor wretch, and for a time society is shocked and stirred up from its depths. In the heat of popular indignation blood is demanded, and, as the administration of justice by due course of criminal law is too tardy to meet the popular demand, lynch-law is resorted to, and the unfortunate, who may really be an epileptic or a homicidal lunatic, acting upon the impulse of a delusion incident to his dreadful disease, is shot down like a dog, or hung up to the first tree or lamp-post, uttering his insane imprecations and enunciating his wild delusions, perhaps with his last breath. Such cases are on record, and we need not go far back in the history of our jurisprudence to find them

Let the criminal, on the contrary, belong to what is called the higher walks of society, and have ample means for a complete defence, and what do we see? Let him be got safely into jail until the first popular outburst has subsided, and his learned counsel and the "experts" will look well to his future interests. These counsellors are not slow to determine what is likely to be the most successful line of defence, and epilepsy or insanity is fixed upon, and they at once set about collecting the evidence on which to ground their plea. In the language of Slender, the history of "all his successors that have gone before, and all his ancestors that come after him," is ransacked in order to find if the insignia of either of these ancient and honorable diseases were ever inscribed upon the family escutcheon, and as a result it is found that a maternal grand-aunt was epileptic, a paternal great-grandmother was actually insane, that his mother had hysteria after he was born, and that the accused himself had sometimes suffered depression of spirits, many times exaltation from spirits, amounting to mania in some instances, and

that once he had an attack of delirium tremens followed by "fits." This is deemed sufficient to commence with, inasmuch as there are many precedents recorded in which this line of defence has been successful on evidence much less positive, touching mental disturbance and irresponsibility, than what is discovered, and is pertinent to the defence of the accused. The court is convened, and the plea is entered in due form. One learned doctor, who has made insanity the specialty of a lifetime, is called for the defence, and another equally eminent for the prosecution. They look askant at each other as they buckle on their learned armor, and prepare for the contest with each other, as well as for the fiery ordeal already being kindled for them by the opposing counsel.

Poor men, they are to be pitied ; but they are well paid, and money not only blunts sensibility, but dulls the keen edge of wit and sarcasm.

One expert thinks, from the testimony brought forward, that there are undoubted insanity and irresponsibility in the case ; the other, basing his opinion on the same evidence, is positive in the contrary opinion. The judge is puzzled and perplexed, and the jury befogged, by the contradictory opinions of the *eminent and distinguished experts*, put forward by the opposing counsel, and as a *dernier ressort*, perhaps, they fall back upon the medical and psychological skill and experience to be drawn from practitioners in the surrounding rural districts. But we need not follow their testimony here, or speak of the enlightenment to judge and jury which follows from it. Is it not all faithfully and fully reported in the columns of the daily press, and preserved carefully for the benefit of posterity in the pages of the *Psychological Journal*, and records of the Medico-Legal Society.

But it is not of medical or expert testimony in the abstract, let it be well understood, that we complain, only of its abuse and misapplication in the hands of selfish, dishonest, and unscrupulous men, and those learned counsellors who, determined to win at all hazards, and by all means, fair or foul, thus make use of them. We place a proper estima-

tion on sound, honest expert testimony, as we trust we shall be able to show, by the cases we propose to bring forward here, and the comments we shall make upon them.

The first case we shall call attention to, came under the observation of the writer several years since. A gentleman of good education, fine intelligence, and of great business activity and capacity, had been the subject of epileptic seizures for about ten years. The fits were of a peculiar character, and accompanied by some strange and interesting phenomena, among which a sort of double consciousness was the most curious. When an attack was approaching, he would stop suddenly in his walk in the hall, clench his fists, and remain in a fixed position, his eyes turned upward, as if gazing steadily at some object on the ceiling, or some elevated point before him. During this fixed, wild stare he would gnash his teeth, and sometimes froth at the mouth for an instant. Ordinarily he did not fall, but at times did so suddenly and heavily, and for a few moments only would be entirely unconscious. At the moment of attack, and while standing motionless like a statue with the fixed gaze spoken of, if any one interfered to prevent him from falling, he would sometimes deal them a severe and stunning blow, or kick with his foot, or seize them and fall upon the floor as if in a struggle for life. In this way several attendants were badly injured. One was so severely bruised, and had his thigh so injured by a fall of this kind under the patient, that the effect is still felt at times, after the lapse of several years. So fearful were the attendants of him at these times, that few would approach to support him when likely to fall, but stand at a distance, ready to lend any assistance they could with safety to themselves. In a few moments he would appear to recover completely his consciousness, and would converse rationally and intelligently, as though nothing had happened. Aside from unusual excitability, petulance, and a desire not to be interfered with in any way, he seemed himself for several days following the fit, but, from curious inquiries made perhaps at the expiration of a week,

it would seem that, notwithstanding his intelligent conversation, he was not fully conscious of what he was doing or of what was going on about him. At such times he would write many letters, and these letters were every way correct, showing no evidence whatever of delusion or any trace of insanity. Basing an opinion on these letters, no one could predicate insanity.

During this period he would positively refuse all medicine, and become much irritated if it was urged upon him, and, if force was attempted, he became furiously violent, and at once ventilated the delusion that we were enemies and assassins, and wished to kill him by poison. We fully believe that he would have killed any one, by any means in his power, who at these times sought to force his medicine upon him. At other times, when this condition had passed, he would take his medicine (bromide of potash) regularly, and would even be disappointed, and call for it if his cup had been for once accidentally left off the medicine-tray. When his fits of sullen obstinacy and refusal had passed, he would ask curiously if he had had one of his paroxysms, had behaved badly, refused medicine, or *written any letters* during the past few days; for the derangement of the usual orderly condition of his writing desk, and the diminution of his supply of stationery and stamps, led him to think he had been writing, though he had no recollection of doing so whatever.

One of the most marked and curious illustrations of this apparent double consciousness in the case of the gentleman is the following:

Once, when seized with an unusually severe attack, he fell suddenly and heavily to the floor, striking his head and cutting it somewhat severely, and at the same time throwing the weight of his body on the palm of his hand, extending it violently back upon the forearm, and fracturing the lower extremity of the radius near the wrist-joint. He appeared to recover his consciousness as usual in a few minutes, but did not seem to suffer any pain, as would be supposed from the violent extension of the wrist-joint and the fracture. He held

out his arm for the doctors to examine it, did not complain of their manipulations, and even made suggestions as to the application of dressings. He appeared natural, though somewhat taciturn and irritable for several days, carrying his arm in a sling without any complaint of pain, or making any particular remarks about the limb, or what had happened. On the fourth day from the date of the accident, he called the attention of the attendant to the cut on his head and the bandages on his arm, and asked curiously what had happened—if he had not been in some row and got severely beaten; and he could scarcely be made to believe that in a fit of his malady he had fallen, bruised his head, and broken his arm, as he declared positively that he had no recollection whatever of what was said to have happened to him during the past few days. He now began to suffer pain in the injured wrist for the first time.

During these periods of unconscious forgetfulness, his appetite was ravenous, and, notwithstanding his delusion of being poisoned by enemies—which prevented him from taking his medicine—he would, if allowed, indulge in the most indigestible articles, food, such as dried figs, raisins, candies and maple-sugar in large quantities. At other times he would not touch these things. Such has also been the case with other epileptics, to whom we shall refer as we proceed with our inquiries.

At times the patient was very social, interesting in conversation, and intelligent and gentlemanly in his intercourse with others. At these times he was a general favorite with all with whom he came in contact, from the medical staff down to the last poor patient who had been sent to the hall to complete his convalescence. At these times his society was courted and enjoyed.

At other times, for a day or two before or after his fits, he was irritable, morose, petulant, fault-finding, and in many ways disagreeable; so much so, in fact, that those who before had courted his society, now shunned him as they would

pestilence or hydrophobia, as all seemed to feel that at such times he was dangerous, and to be left alone.

Touching the responsibility of a case like this before the law, the whole matter would hang upon the precise condition of the patient at the time of the act. The fact that he was an epileptic, and even at times insane and unconscious of what he was doing, should not, we think, impair his responsibility at other times; for most of the time he was not only rational but fully conscious of his acts and their consequences, and, committing murder at these periods from a *motive*, and not, as at other times, under the influence of *delusions*, he should be held responsible for his acts, and suffer the consequences of his crime. We know there are great difficulties to be met here, especially in determining the precise time of transition from the state in which the faculties are controlled by disease and delusion to that which follows, but these difficulties are not wholly insurmountable, if met with honesty and determination. The existence of epilepsy *per se* should not be held as an excuse for crime; this is a disease quite as independent of insanity as many others. Insanity is indeed very prone to arise in the course of it; it may be engrafted upon it, as upon phthisis, either as a sequence, symptom, or concomitant, but it is not the disease itself. Had this patient committed homicide while resisting his medicine under his delusion, he would have been clearly irresponsible; at other times we see no reason to doubt his complete responsibility.

G. W. P., aged forty, was admitted to the Hudson River State Hospital, March, 1872. He had suffered attacks of epilepsy for ten years, attacks coming on once a month regularly. He was single, and lived at home with his mother and a maiden sister, and the relations of the family had always been of the most kindly and affectionate character. Another sister, a widow, lived at a short distance from the homestead.

Laboring under the excitement of some law proceedings during the previous week, aggravated by a paroxysm of his disease, he became maniacal.

Patient had been quite unwell for several days, and the widowed sister had remained at home with the other sister and mother, to assist in the care of the epileptic brother. He occupied a room opening into the sitting-room, on the floor of which the sisters had arranged a bed, in order to be on hand to attend to his wants; the mother also occupied the same room.

About 4 A. M., patient got up and said he was going to stop the clock, as its ticking annoyed him and prevented his sleeping; after stopping the clock he returned to his room, but did not remain there long. He got up again, opened the door of the sitting-room, and fell flat, or threw himself on the floor, with arms extended. The sisters and mother were much alarmed, and, raising him up, carried him to their bed and laid him down. The mother sat on the bed to be ready to attend him, and the sisters went into the patient's room and laid down on his bed.

They had not been there long before the patient, who had in the mean time lost his mental balance and was now possessed of the demon of murder, started up from the bed and seizing a fire-shovel went to the room where his sisters were. He shouted out as he approached them, "I'm going to kill you both; the next place I will meet you is at the bar of God," and commenced striking them on the head with the shovel. Then throwing that down, he seized them by the throat and tried to strangle them. The mother went to their help, but was unable to render much aid, being old and infirm, and she received some injuries in the struggle.

The sisters succeeded in making their way out to the sitting-room, and here another fearful struggle commenced, the three women shrieking in vain for aid, no house being near, and the maniacal brother loudly uttering his threats of murder. In the contest the stove was overturned and the house set on fire.

At length the sisters succeeded in breaking away from the murderous grasp of the brother, and fled from him, Miss P. running out at the front-door, and Mrs. C. starting through

the kitchen to gain a door in the rear of the house. The patient pursued Mrs. C., and, having got a razor out of a bureau drawer, he overtook her just as she had got the door open and was starting to run.

Here another horrible struggle took place, the brother trying to cut the sister's throat, and she battling for life. In the effort to get the razor from him she received two severe cuts, one in the right arm, just missing the main artery, and the other in the hand. He drew the razor across her throat, making a terrible gash, laying bare the trachea and the root of the tongue, and narrowly escaped the main arteries. Had the cut been inflicted an inch lower, the force with which it was given would have severed the arteries and caused almost instant death.

A neighbor coming up at this time knocked the brother down, and after another struggle, managed, with the help of his young son and Miss P., to secure the patient. But it took their united strength to hold him, and they feared that Mrs. C. would bleed to death before other help could arrive.

At length, however, more of the neighbors came, the patient was tied, and Mrs. C. was cared for. She had made her way into the house after receiving her wounds, and the sister, knowing that the building was on fire, was afraid that her mother and sister would be burned up, but the flames were soon extinguished, and all danger from that source was averted.

On admission, patient was noisy and violent, striking attendants severe blows. Said they had murdered his mother, and were now, as he expressed it, "after his poor carcass." Talked loud and in the tone of a ranter; said God would call his enemies to justice. He continued in this condition for ten or twelve days after admission, when he became more quiet, and began to take food, if allowed, in enormous quantities, and would suffer indigestion, with regurgitation, acid eructations, and gastralgia. On the 29th and 30th of May following, he had severe epileptic convulsions; after

these he was quiet, sleepy, and taciturn. On the 10th of June he was removed home, contrary to advice, by the sisters on whom he made his murderous attack. He recollected nothing of having used the razor, and, when he saw the account of the transaction in an old paper he picked up in the ward, he was much agitated, inquired anxiously after the condition of his sisters, and denied all knowledge of the transaction, for which he expressed great and apparently unfeigned sorrow.

We are confident that much of the dangerous violence of persons in epileptic mania results from the delusion of fear of injury to themselves, and the necessity of acting vigorously in self-defence. Indeed, so common is the delusion that they are being pursued by enemies with intent to kill, that it may be considered almost a characteristic symptom of this form of mania. That peculiar expression of countenance, a sort of blending of fear and suspicion, which all who have seen much of this disease must have observed, points, we think, to this delusion. Sometimes the patient, after recovery from the fit, is conscious of having been animated by this suspicion and this fearfulness of injury; but in most instances, according to our observation, this is not recollected, but forms a part of the blank oblivion in which every thing for the time being is shrouded.

A. W. V., aged twenty years, was admitted into the Hudson River State Hospital, June, 1872. For a number of years he had been the subject of epileptic attacks. He would fall and be unconscious for a time, but not convulsed, breathing stertorous. He would continue in this condition of sleepy unconsciousness for several hours before coming to himself. For nine months previous to admission he had not suffered an attack, but a few days before coming he was beaten severely about the head by a person with whom he came in contact. The fits then returned, and he became furiously maniacal and violent. He ran naked into the streets, screaming wildly, as if animated by the fear of some great calamity. He climbed on the porticos and roofs of houses,

and when the police approached to arrest him became very violent, striking, biting, kicking, and screaming "Murder!" Before his arrest he had made an attempt to hang himself in his suspenders, and was cut down. He quieted down, and when brought to the hospital had a stupid, confused, and suspicious look. He answered questions slowly, but, aside from pointing out severe pain of the head, could give little or no account of himself. He had been bruised severely about the head, and said men had been after him to murder him.

The day after admission he was more comfortable, composed, and reasonable, and took food moderately, which he had refused, probably under the delusion that it was poisoned. The third day after admission he was sent to the convalescent ward. He was quiet and gentlemanly, was visited by his wife and friends, and showed no evidence of mental disturbance. On the 29th, twelve days after admission, he left for home with his wife, apparently in his usual health. Before leaving the office with his wife on the day of his discharge, we questioned both closely respecting the phenomena attendant upon the fits, and the sensations and delusions experienced, and elicited from them very intelligent, satisfactory, and, we are confident, correct replies. His wife, who had attended him through many of his paroxysms, and watched him carefully, stated that his chief animating delusion at these times was one of fear. He seemed to think that he was pursued by ruffians, who wished to murder him. He would watch closely people that approached him, and move away, keeping upon them a keen, penetrating and suspicious look. If she or any one else came too near him, he became furiously violent and dangerous; this state, she said, would last from a few moments to half an hour, sometimes for an hour, seldom longer. He would emerge from this condition, as he entered it, instantly, and make inquiries how long it had lasted, and what he had done during the time. His wife asserts that she is confident he did not recognize her during these periods and was as likely to make a violent onslaught upon her as upon any one else that came near him. After coming to him-

self he had no recollection of the delusions of fear that had animated him, at the same time, had a distinct remembrance of certain physical symptoms which preceded and followed the attacks. It appeared, he said, as if a sudden blindness would come over him. A mist seemed to hang before his eyes, and his head appeared heavy and as if constricted by an iron band. He said he felt as if the skull were too small for its contents.

He also experienced shooting pains about the præcordia, attended with difficulty of breathing; on looking for a length of time at an object, he would experience a sensation of giddiness, and he did not feel natural in the head sometimes for hours after his attacks.

Before these attacks his appetite would become voracious, and afterward he would suffer severely from indigestion, acid, eructations, and gastralgia, with at times regurgitation of food.*

A patient now in the Hudson River State Hospital was, for some time, the subject of epileptiform seizures; he was apparently unconscious for ten or fifteen minutes, but there were no spasmodic movements. He described the approach of the fit as being accompanied by dizziness, with a sensation of what he described as "rushing of blood to the head." He says at these times the power of motion was denied him, and he was commanded by God to stand still, as Joshua commanded the sun and moon. These attacks sometimes lasted from half an hour to an hour.

This patient also experienced at times hallucinations of hearing. At night he said he heard bells ringing, whether asleep or awake, but never heard the sounds by day. At times his fits have apparently been supplemented by paroxysms of violence, during which he would strike any one that came in his way. At one of these periods he spoke

* Note, January, 1875. We not long since received a letter of enquiry respecting this man from a sheriff of a county in one of the Western States, from which it would appear that he was under criminal indictment for some act committed no doubt in one of his paroxysms.

wildly and incoherently, calling himself a king, and demanding from those about him the homage he considered due his exalted position. This patient, not long since, passed through an attack of acute articular rheumatism, and since his recovery from this he has had no epileptic seizure, but remains quiet, taciturn, and feeble-minded, but otherwise comfortable. He took formerly much bromide of potassium, but for two months or more he had never taken the remedy, so that his freedom from seizures similar to those described above cannot be ascribed to the influence of this useful epileptic palliative.

We see no way of dealing with such cases as we have here brought forward, where the question of responsibility comes up before a judicial tribunal, than by a careful, intelligent, honest analysis of all the facts, circumstances and conditions, by one who has made careful studies of many cases, and is fully acquainted with the strange, curious, and apparently contradictory phenomena they present. Such an analysis will, we are confident, bring out the truth touching the responsibility or irresponsibility of most cases. Herein consists the importance of honest, careful, and experienced "expert" testimony, the value of which, in the administration of justice in all such doubtful cases, cannot be overestimated. Upon it will sometimes depend the life of a fellow-creature, and the safety, not only of his immediate friends and family, as we have seen, but the entire community surrounding him.

THE TRUE OBJECT OF MEDICAL LEGISLATION.*

BY STEPHEN ROGERS, M. D.

“There’s no fool, whate’er the sex or grade,
Monk, barber, shrew, comedian or old maid,
Soap boiler he, or pompous pharmacist,
Bath-keeper, forger, or vile abortionist,
But has his name among wise doctors placed,
And thus, through greed, the healing art’s disgraced.”

—*Code of Health. Ordronoux’s translation, modified to suit the times.*

The diseases and the injuries of mankind, and their treatment, have, from very primitive times, been subjects of great public interest. While the history of the medical art shows that an occasional exalted character has attracted especial public attention and admiration, it also shows that the aggregate standard alone gives the popular status of the profession. The father of medicine remarked, that “medicine is, of all the arts, the most noble; but, owing to the ignorance of those who practice it, and of those who inconsiderately form a judgment of these, it is, at present, far behind all other arts. Such persons are like the figures which are introduced in tragedies, for, as they have the shape and dress and personal appearance of actors, and are not actors, so also physicians are many in title but few in reality.” This quaint remark of Hippocrates, made more than two thousand years ago, is still far too applicable to a large class of the so-called doctors of the present day. Whatever may have been the extent of the scientific knowledge of the physicians of those early days, as compared with that possessed by the profession to-day, it is a notable and interesting fact for the public

* Read October, 1872.

to know, that those early physicians entertained and inculcated the most high-minded, self-sacrificing; humane and noble sentiments respecting their obligations to the public. In witness of this character of their teachings, we have the oath required of the pupils who went forth into the world from the medical classes of Hippocrates: "I do solemnly declare, that I will honestly, virtuously and chastely conduct myself in the practice of physic and surgery, with the privileges of exercising which profession I am now to be invested; and that I will, with fidelity and honor, do everything in my power for the benefit of the sick committed to my charge." To the credit of the character of the profession be it said, that this oath is still required of the graduates of many of the medical colleges of the present day. The principles of this oath are indeed the leading features of the ethical code of the profession. Half a century ago, the Medical Society of the State of New York adopted, and has since sustained, the following sentiment: "The importance of the medical profession requires that it should be exercised with fidelity to its scientific principles and approved doctrines; with honor to all its members, and with justice and humanity to the sick. A departure from these principles constitutes quackery." At a more recent period, the representatives of the profession of this whole country, in the American Medical Association, adopted the following creed:

"A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health and the lives of those committed to their charge depend on their skill, attention and fidelity." It is a striking fact, and one of public interest, as indicating the sentiments of the profession at large, that this

sentiment forms the first section of the first article of the code of ethics of the American Medical Association.

In view of these historic facts, we are not infrequently shocked, as the physicians 2,000 years ago were, to see that honest, laborious professional learning is supplanted by superficial and criminal quackery, much to individual and public detriment. These same feelings were often experienced by Hippocrates, by Galen, by Harvey, and by Jenner; and it can hardly be doubted that they will continue to afflict the true physician to the end of time; because the great mass of mankind are, always have been and probably always will be, unqualified to distinguish between truth and falsehood in matters pertaining to disease and its treatment. During the last fifty years, the idea has been very prevalent, and has been vehemently advocated by some of the most prominent medical men of this State, that improved education of the people would correct the liability to imposition by medical impostures. But it must have become apparent to every observing physician that this is a purely utopian idea.

He daily sees the most intelligent occupants of pulpits, the most gifted members of the bar, the leading statesmen of the nation, not to mention the crowds of well educated and opulent citizens, exercise even less common sense and judgment, in the matter of selecting medical adviser, than the most illiterate laborer. Though our schools, from the lowest up to the most renowned colleges, include, in their course of instruction, lectures in the, so-called, popular anatomy and physiology, their pupils and graduates are as facile dupes to mountebanks as were those of a generation ago. It has fallen within the observation of most of us, that the most ardent advocates of, and believers in absurd, preposterous and even dangerous systems of therapeutics, are found among the instructed people. On the other hand, it is generally admitted that the class of our population whose education is so slight as not to have inspired a presumption to know anything about medicine, are happiest and healthiest. If instructing the people

has effected anything in this country, it certainly has demonstrated that, as respects medicine, "a little learning is a dangerous thing." Further, I call upon the profession of the whole country to witness, that a degree of education which may entitle the person to be ranked as learned, is continually met with in the most remunerative patrons of charlatans and impostors. It is, hence, very obvious that the so-called popular education, and even the university education, are far from producing wisdom in matters of medicine. Therefore, the education of the people, in the American sense of the term, is not shown to have the slightest influence in protecting them from impostures in medicine.

There can be little doubt that this fact results from deception. The people resort to charlatans with the idea, and the belief, that they are either learned or inspired. I cannot believe that many people of the present day agree with that ancient quack, Thessalus, and the more modern one, Paracelsus, that education is useless for a physician. Few underestimate the value of a knowledge of what are known among physicians as the elementary branches of a medical education, such as anatomy, physiology, symptomatology, natural history of disease, pathology and therapeutics. Few of even the most superficially educated people would allow one to undertake to treat their diseases, whom they believed to be totally ignorant in these elementary branches of a medical education, or whom they suspected of being imperfectly educated in subjects relating to human disease and its treatment. In this view of the subject, the obligations of physicians to the public must be based upon the admission that the masses are, by education, disqualified for determining their own medical interests and welfare, and have no right to practice, at their own peril, on the opinions they have so crudely formed, of matters in medicine. If this be admitted as a principle, what justification can be offered for the following sentiments written by one of the old and most respectable physicians of this State? "So long as a large portion of the community, including many persons of education and skill in the manage-

ment of their affairs, are willing to employ practitioners offering no guarantee of learning or character, it is not the business of the State to protect them against their own errors of judgment." The law, therefore, properly "leaves them to make their choice of physician, at their own risk, and on their own responsibility." "Each man chooses his doctor as he does his clergyman. Many make a bad choice, but no one to has a right to interfere." A more fallacious simile could hardly be invented. I will not dispute the right of any one to select his church or clergyman, because we have very high authority for the belief that such clergyman may be equally useful, whether learned or ignorant, in the worldly sense; but there can be no question of my right or the right of the State to protect a citizen from exposure to robbery, to murder, or to the chances of becoming a victim to false pretenses, whether the pretender or the criminal be an ignorant doctor or an ignorant lawyer. Too many of us are vainly hoping that the abuses and the calamities resulting from practice upon this general ignorance of medical affairs among the people, will bring their own correction. With as much reason might we hope that the insects of the coming summer will shun the flame, because their progenitors of the last summer were burned. A very primitive mind can understand how murder subverts all social safety, but it requires a long, studious and laborious training to prepare one to judge in matters of the proper treatment of disease, and of what constitutes malpractice. I do not apprehend that this conclusion will be gainsaid by one properly educated in matters of medicine. We do not apprehend any considerable opposition on the part of the people to this proposition as a general truth. If, then, nothing is to be hoped from popular education, some means to secure competence in those who pretend to treat disease, is clearly the remedy demanded. If the State can control the violent, punish the criminal, and legislate to protect the rights of citizens, it unquestionably is bound to take every possible means to guard the people against the depredation of pretended, but totally unqualified, physicians. Is that an axiom?

The right to health and life is certainly far above the trumpery of property. It is said that past legislation has been ineffective and eminently unsatisfactory, and therefore no legislative effort promises any better result; which is equivalent to saying that all attainable wisdom was long since reached in this matter.

But few statutes were ever enacted of which similar statements have not been, and could not still be made. Laws are mere expressions of the necessities of a people; and they grow, change form, and extend as those necessities indicate. That the medical laws brought into existence three-quarters of a century ago, have become mummified, obsolete and ineffective, is by no means a valid reason for not attempting to legislate now. With quite as much reason might we insist that the best steamboat ever run on the Hudson was Robert Fulton's. Let it first be decided if there be any public necessity for legislation, and then the course is clear. On that point, the whole medical profession of the State and country are, as I believe, unanimous. All know that the people, of this State especially, have no guarantee that the word "Doctor" in front of a house does not point to the residence of an ignorant and dangerous pretender, or a first-class criminal. The profession, fully aware of this fact, have a very clear duty to the public to perform. But in the performance of this duty, let us not trip against the rock upon which vast numbers of good professional efforts have been wrecked during the last thirty or forty years—the rock of therapeutic details and difference. We must sink this matter of therapeutic contention beneath the surface of the great paramount necessity of adequate instruction for all physicians, however named. If we desire to rescue the community from the soulless quacks, who thrive on human ignorance and credulity, we have no time to lose, no effort to squander in fruitless disputations about medical sects. In the language of a late distinguished member of this Society, "it is treason to the interests of humanity to permit, when we have the power to prevent, speculation on human suffering; and

if there be a reality in the succors which medicine can afford, it is our duty not only to afford them, but to guard against the frauds which would prevent their timely application." If we have ever been traitors to humanity, in any possible sense of the word, let us not repeat the sin. Upon the assumption that a properly educated physician will, in some form or other, do what appears to him appropriate in cases of disease and in wounds, let us insist upon the education, and leave the collateral questions of therapeutical belief and faith to the conscience of the individual. The time was when the announcement of a belief in some newly discovered systems of therapeutics could be safely attributed to studied fraud, or to monomania; but that time has passed, and it may now be often ascribed to a sincere and firm conviction, though upon data which we regard as altogether insufficient. If these convictions be unfounded they can be corrected by extending the list of facts upon which they are built; that is, by improving the education. By this means alone can the public value and the safety of physicians be augmented. It is, therefore, clearly in the interest of the people, and not in the interest of the profession, that all physicians be adequately educated. The people have a right to require it. It is well known that much of the grave disease which reaches the learned and skillful physician has become so from the improper management and the tampering of ignorant pretenders and druggists. Pecuniarily, therefore, quackery is advantageous to legitimate medicine; and it is no uncommon thing to see the families of the charlatan, whose panaceas are advertised in all parts of the world, placed under the medical charge of the educated physician.

It must long since have become evident that no effort to secure the required and proper education of physicians could be as generally successful as desired, unless all those whom the public have been taught to regard as competent physicians, be united in the scheme. There is serious reason for the opinion that the acknowledged failure of legislation, and of the efforts of the county, State and national medical

associations, to elevate and to place legitimate medicine in its true light before the community, is attributable, so far as it is true, to two circumstances, viz., their having been directed to the protection of the profession itself; and that those efforts have uniformly ignored the right of the so-called new schools to any voice in the matter.

Medical ethics has also been a large paralyzing element in past legislation. Ethics can never find any sympathy or support with the people, or from law-makers. Its field, its duties, and all its prerogatives, are found and enjoyed in the societies organized under the laws, and there it must be confined.

The people of our day have a right to the assurance that those who offer to serve them as physicians are intelligent in that subject, and it is the plain business of the profession to do all possible to provide that certainty. That being secured, the societies still have charge of ethics, have control of the selection of their associates and members, while the State manages all matters pertaining to crime, misdemeanor or mal-practice. I must take this opportunity to say, that history does not justify the sentiment often expressed, adversely to the influence of county medical, and other medical societies, upon the general character of the profession. On the welfare of the people they have also been strikingly salutary. It is by no means impossible that a recent remarkable exhibition of depraved morals, in the Senate chamber of this State, may be regarded as an index of the result of abandoning the public to their own inclinations, uninfluenced by this salutary effect of the county medical societies upon the community.*

Dr. Stearns, the most public-spirited and distinguished physician of his time, writes of this subject as follows: "Those who witnessed the origin and progressive settlement

* Allusion is here made to the opposition to the amendments of the law relative to criminal abortion, offered by Senators Lewis, Bowen and Chatfield, from the Twenty-fourth, Twenty-ninth and Thirty-first Senatorial districts, including seven counties, three of which have no county society.

of the northern and western sections of this State after 1790, will remember the mania that infatuated the emigrants from the east, and the ambitious projects formed by those who assumed the title of doctors. Many who had never read a volume in medicine, were suddenly introduced to an extensive practice, and to a reputation of such imposing authority as to control the opinions of their superiors in science, and to prescribe rules of practice for their government. Consultations were generally distinguished for gross controversies at the bedside of the patient, whose health and life were often immolated to the ignorance, prejudices or discordant theories of the contending physicians." (*Trs. St. S.*, 1836, 1837.) "It is admitted on all hands that, both in town and county, there resulted from the organization of the county medical societies more harmony, courtesy and a much more liberal feeling among medical men; and, what is more important to the public, a proportionate advancement in education, general and medical, among them." There is abundant evidence to show that from 1806 to 1830, before the acts repealing the original law organizing the county societies commenced, the influence of those societies in the correction of evils was very marked. We, therefore, see nothing in the past history of legislation to discourage us from attempting, in like manner, to remedy evils which, if not quite like or equal to those of eighty years ago, are infinitely harmful to our people. The causes which led to the repeal and to the destructive modification of those laws, have been subjects of discussion, have served as themes for orations, and have occupied reflective minds for a generation past. Says Dr. James R. Manley, one of the historians of that period, "the organizers of the State and county medical societies would have been shocked at the bare suggestion that, within a little more than thirty years from the grant of those charters, medical college-making would become a trade, and that the signatures on their diplomas would be lithographed, and they would be sold about the county at various prices, like the ware of an itinerant peddler." He adds: "Is it a matter of astonishment, then,

that the public have become disgusted and have lost their confidence in the resources of an art which can admit of such abuses? We are now suffering the results of all these devices to defeat the plain intention of the Legislature in the passage of those laws." In the opinion of this author, public confidence was destroyed, and legislative control of the practice of medicine was discontinued, on account of professional avarice and corruption in connection with medical colleges. This opinion finds too much support in the fact, well remembered by our older lawyers and public men, that, thirty or forty years ago, there was a very general loss of confidence throughout this State in the medical profession, and a consequent sentiment in the Legislature that, as there had been a failure to secure by law what the people desired, the law might as well be repealed. I am not inclined to extend these comments on the sins of our medical colleges of that early day; but that too many of those of the present time, even those in our metropolitan cities, are active agents in producing professional corruption and debasement, is admitted by the profession generally. The number of diplomas which have been and are continually sold and issued by medical colleges to persons who are known to be of the worst possible morals, and to well-known fraudulent and criminal advertisers, is by no means encouraging to contemplate. It is a picture as bad as any possible facts about our colleges of fifty years ago. It is, however, simple justice to say, that as a rule, the medical colleges have, during the last twenty years, done a great amount of public good by their zealous and scientific teaching. All, however, are aware that there are too many chartered colleges in our country, whose abuse of privilege, whose venal carelessness of the public good, deserve the most emphatic and public reprobation of every true physician. It has long been the opinion among leading members of the profession in this country, that the only hope of securing a proper education of practitioners of our art lay in the concerted efforts of medical societies and medical colleges, and, as a result, the legal and practical respectability which to-

day attaches to a medical diploma is by virtue mostly of the estimation it is held in by the medical societies, who, so far as I know, have never been imposed upon by accepting bogus ones. Dr. Manley advocated the belief that the medical societies of this State were organized for the high-minded, moral and public-spirited object of securing to the people qualified physicians, and for no other purpose. After testing the workings of the laws pertaining to those organizations for thirty years, and finding they had no power to resist the degenerating influence of the colleges, he thus commented upon them. The terms of the charters of these societies were thought to be as liberal on the one hand, and as restrictive on the other, as could well consist with the genius of our political institutions; the presumption being that what it lacked in power to restrain unqualified practitioners could easily be supplied through the influence of the personal character of the members of the societies. He grieved over the disappointment of the profession in this cherished and praiseworthy hope.

Notwithstanding this disappointment, and the notorious fact that our medical societies had extended their influence little beyond their members, thirty years after Dr. Manley's lamentations, the American Medical Association resolves, "that whatever is done to establish and maintain a just and fair standard of medical education, must be done by the profession itself through its own volunteer organizations. The profession is competent to declare, through its representative in the national, State and local societies, what shall be the standard of attainments for those to be recognized and admitted into its rank, and to establish the boards or agencies by which compliance with such standard shall be ascertained."

So long as medical colleges have power to license to practice, it is very manifest that this resolution does not state the fact. Societies cannot control admissions to the ranks of the profession, though they may to their own ranks. It is equally clear that the volunteer associations and their

boards, contemplated by this resolution, can have no legal status, and, therefore, so far as relates to the public, would be useless. I have already shown that the history of the influence of volunteer medical societies, even though organized under State laws, does not warrant us in the hope that they will afford the public the slightest protection against the impositions, abuses and crimes practiced by unlicensed, unqualified and immoral pretenders to medical knowledge, nor from unscrupulous though educated doctors not belonging to such societies. Now, as to medical colleges alone, it must be obvious that, as the law now is, they are equally powerless to protect the public. There is another unfortunate circumstance connected with them, which, according to the American Medical Association, has been productive of much evil. With reference to the matter of the dependence to be placed in them alone, in elevating the general character of professional qualification, the association above mentioned says, in a preamble, that "the results of all the efforts made during the last twenty-five years to elevate the standard of medical education, through concert of action among the numerous medical colleges of this country, have proved with equal clearness that such concert of action in an efficient manner is unattainable." The accumulated evidence, therefore, goes to convince us that neither the acts nor the resolutions of medical societies, nor of medical colleges, not even their united action, unaided by the strong arm of the law, will ever assure the people that the sign of *Doctor* on a door, or on a circular or on a card, is a guarantee that his knowledge of medicine justly entitles him to claim public confidence. It is manifest, therefore, that medical societies and medical colleges, however excellent may be the spirit and intention of their acts and resolutions, have no more power to take measures for the protection of the people against impostors and criminals, unless aided by vigorous and appropriate laws, than would a board of bankers to prevent forgery and counterfeiting. While medical societies may guard themselves from evil and criminal association,

they have, at present, no power by which they can protect the people from this danger and contamination. Society must protect itself in this respect in the same manner it now does against crimes and misdemeanors. Let it first be regarded as an offense against the public safety to attempt to practice the art of medicine without adequate preparation, and there will follow little difficulty in obtaining the laws needed for the punishment of the offense. As I have before said, the mass of the people are ready to accept this proposition. If there be no sectarian discussions, no further wrangling over therapeutical doctrines, which the public will never appreciate, but a united effort upon this grand requisite of education, the public will support it.

All intelligent medical men, whatever be their especial creed, must unite upon this elementary basis of proper education, with the view of guaranteeing to the people that those who pretend to treat disease are worthy of their confidence, and the people, it is believed, will be with them.

I am convinced that the time is near, if it has not already arrived, for the people to exact this. If we are not the leaders we may become the led: a position the profession has never yet fallen into, and it is hoped never may. No defensible argument can be advanced against the profession's availing itself of all lawful and available means to secure this public good. At all events, the argument that to secure it by the tacit acknowledgment of a legal and popular status, to dissenting sects, would be professional degradation, is no argument, is not a valid objection, is mere effete twaddle. If the dissenting sects pledge themselves to the principle that the public good is before sectarian doctrine, the profession can hardly find it expedient to dissent from that proposition. All must unite. What reason have we to hope for such a union of effort? If the sentiments expressed in ethical codes have any significance, if they index any passages expressive of the actual feeling and sentiment of a profession, they are as truthful for one sect as for another. If it, then, be true that one code is as reliable as another, there is no reason to question the sincere desire of at least two numerous and

prominent sects to exact a proper medical education of all who pretend to practice. One of these declares as its creed, that "no person can be considered as a physician who has not, by collegiate attendance or otherwise, made himself acquainted with at least the practical portion of the departments of anatomy, physiology, surgery, materia medica, theory and practice, obstetrics and chemistry." Another sect declares that "a complete medical education, of which the diploma of a medical college is the formal voucher, furnishes the only presumptive evidence of professional acquirements and abilities."

The American Medical Association code declares that "a regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession." How any diversity of opinion can legitimately exist among three sets of people, governed, or professing to be governed, by codes so nearly identical, is to be explained in the same manner that the differences between religious sects are explained, and, like them, the ultimate result with all is the same. I have been to much pains to ascertain how far this theory is in conformity with the actually expressed feelings and wishes of the two sects alluded to, and find the theory fully sustained. Upon that discovery, measures were inaugurated, and have been to a considerable extent matured, which, if adopted, will throw them and the profession before the public in such a position as to test their respective merits and their sincerity of professed interest in the public good.

The measure is based upon a united effort on the part of the profession, with the so-called other schools, to secure what all agree upon. By its adoption, it is believed that a most salutary step will be taken towards professional elevation through legislation.*

* This plan was embodied in the Assembly bill, No. 839 (1872), entitled "An act relative to the Medical Laws of the State of New York," which passed both houses of the Legislature, but the Governor declined to sign it.

This measure now appeals to the profession for its support. While it does not hope to effect a professional millennium, there is, in its provisions, much which leads to the hope that it will effect a great improvement upon the present chaotic state of medicine. The law that we may thus unitedly obtain will, no doubt, require pruning and grafting, as demand presents, and as evasion indicates, but, as a beginning, it is earnestly hoped that the profession of this metropolitan State will not be the last to indorse it. If we thereby succeed in securing such laws as will guarantee to the people that the physician's sign points to the residence of one who is adequately educated for his duties, that such sign indicates the abode (in the language of a distinguished member of the late Constitutional Convention) of one who is so trained and educated that the ennobling traits of humanity—sympathy, charity, conscience and morality—are prominent in his making up, and that rarely, very rarely, is he a development of sordid desires, of cultivated avarice, misanthropy and brutality then, we, as a profession, may appropriately say to them, in the language of the Code of Ethics: "The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease and health for the welfare of those who avail themselves of their services, certainly have a right to expect and require that their patients should entertain a just sense of the duties which they owe to their medical attendants."

There can be little doubt that physicians, as a class, enjoy as large a share of the confidence and respect of the public as their services entitle them to; and it is very much to be feared that it will diminish from year to year, so long as we supinely abandon the community to the mercies of ignorant and criminal charlatans. "The first duty of a patient," says the Code, "is to select as his medical adviser one who has received a medical education." We all know that the mass of the community, however much disposed to do so, are totally disqualified for such a duty. Medical attendants are,

in very many cases, first seen under emergencies ; and though their advice and their treatment may be truly barbarous, destructive, and even fatal, yet by dint of ignorant assiduity, before people more ignorant than themselves, such attendants may create a favorable and enduring impression. The liability of the people to be deceived by cunning pretenders is so thoroughly well known by the profession, that it seems almost unnecessary to even allude to the fact, in order to present an additional and important reason why every true, honest and humane physician should not avoid any opportunity to prevent it. He will be recreant to his trust, and guilty of behavior unbecoming the model physician, if he petulantly abandon the people, in the midst of this danger which besets them, simply because, in the perversity of ignorance, they seem determined to be victimized by impostors. Let us convince them that physicians are made by education, and not born ready made.

INAUGURAL ADDRESS

OF

CLARK BELL, Esq., As PRESIDENT OF THE SOCIETY.*

GENTLEMEN OF THE MEDICO-LEGAL SOCIETY :

I ACCEPT the trust you have so unexpectedly and so flatteringly conferred upon me, with no little reluctance, and with real concern, through a fear which I trust is not an unworthy one, that I shall not be able, in the administration of its duties, to realize for you what you have the right to expect, and what the well-being, and the future, of a society capable of so much usefulness ought reasonably to demand.

I feel that it is not a mere question of intentions, for I am full of good ones for your prosperity and well-being ; but I cannot well see my way clear to devote that time, that skill, and that perseverance, to the discharge of its duties, which has distinguished the labors of my predecessor, and made your Society under his skillful leadership a success, and a credit to you all.

Medical Jurisprudence was my delight, in earlier studies, and it is a branch of the legal profession full of interest, and one that will repay the student for all the labor he gives it, while to the medical profession it bears a much more important and intimate relation.

Few lawyers are brought, except rarely, in direct contact with the leading points involved in medico-legal questions, while the successful practitioner of medicine encounters

* Delivered November 14th, 1872.

more frequently, and on every hand, the questions which its study raises.

This is doubtless one reason why the past history of your Society has been, in so large a measure, the fruit of the labors of medical men among you; but it is still quite true, that your Society opens a rich field for the lawyer and legal student of medical jurisprudence, and has, doubtless, awakened in certain circles among you a desire to enlist among us more talent and members from the bar of the city of New York.

It has seemed to me that that large class of cases involved in the application, and practical workings of Life Insurance, was a subject to which it would be of service to call the more marked attention of our Society, especially of its legal members, and those physicians who have made Life Assurance a specialty, and with this in view, I shall hope to interest new talent to enrich our future meetings upon this most interesting branch of study.

The Criminal Jurisprudence of the country is not the only source to which we may laudably look for our most interesting cases.

The increased and extended principles involved in many questions in our Probate Courts, and in many of our commercial cases, even, have reasonably awakened deep interest among lawyers, and I shall deem it my duty, and esteem it a pleasure and privilege, to endeavor to awaken among leading members of the bar an interest in our Society, in which, I trust, I shall have the co-operation, not only of my legal brethren among you, but also of the medical men who can each and all, without much effort, materially aid such a movement by personal effort and intercession.

Medical Jurisprudence, as a distinct branch of the science of the law, is, and has been for years, taught to the critical and analytical law student; and the lawyer would be esteemed imperfectly educated in his profession, who had not mastered at least its elementary principles. Indeed few, if any, of our well-read lawyers could be found who had not devoted

considerable time and study to this important branch of a thorough and complete legal education. Now, while this is a truism among lawyers, is it equally true that the teachers of medical knowledge have devoted the space and time in expounding the science of medical jurisprudence to medical students, especially in its legal aspects, that the actual necessities of the case have demanded? I have long felt that there was no more reason why the lawyer should be versed in the medical part of medical jurisprudence, than that the physician should be in the legal part of the same study.

Am I right in fearing that the physicians of the age, as a class, are left, when they receive their degrees, by their professors, with but a very limited knowledge of those branches of the law with which they are of necessity to come into immediate contact?

Is there any reason why the medical gentleman should not be versed in all the elementary legal principles involved in the questions which he is called upon to investigate?

How much wider and broader is the vision and judgment of the medical expert, who considers the questions of the hour, in their legal as well as medical aspects, as the well trained lawyer does? I would advise the medical expert who proposed to make medical jurisprudence a prominent part of his practice, to study it from its foundations, elementarily, and in its legal as well as its medical phases.

I would have him thoroughly versed in all the statute law of the State bearing especially on that large class of cases in which physicians are so frequently called upon to decide and to act, and I am quite certain that a Chair of Medical Jurisprudence in a medical college, filled by a lawyer of culture and study, would add largely to the acquisitions medical gentlemen need and ought to have who commence, in such a city as New York, the practice of a noble profession with a laudable ambition to win and deserve distinction. While I do not think it would be proper on such an occasion as the present, to occupy your time, from the more important duties of the evening, with extended remarks, it may not be out of

place to briefly advert to the origin, mission, and successes of your Society. It is but six years since its inception, and but a little more than four since its incorporation under the laws of the State ; still, this Society has so industriously pursued the purposes of its founders, that I think I may take the liberty of saying in its behalf, that it has already attained distinction, both in our own country and abroad.

Prominent among the various purposes for which this Society was organized, beyond the advancement among its members of that skill, knowledge, and preparation which should qualify them to act wisely, usefully, and intelligently as experts in the exciting cases and questions of the day, was, doubtless, the idea of concentrating and crystalizing the highest talent of the land where, under an organization, it might make its influence felt not only upon exciting public trials, but in urging and pressing important reforms in existing laws, and in awakening public sentiment to the public needs, as to such legislation and reforms.

The founders of this body were men who thought and felt deeply on the mission of such a society, and of the broad field of usefulness it ought to occupy.

It is a source of just pride and pleasure that I can ask you to allow me to call your attention to the very important part taken by this Society in the advocacy and final passage of the law, now upon the statute books of the State, in regard to the punishment of abortion. This praiseworthy and beneficent result is due to the general public sentiment awakened, aroused, and educated upon this most important subject, by the discussions originated by your Society, and conducted to such favorable issues under its direct leadership and supervision.

That principle, announced with so much force and courage by my predecessor, in relation to the alleged use of chloroform in cases of robbery, etc., although at first blush it might have seemed to be contrary to the commonly received opinion of the public, and perhaps of the major part of the professions of both law and medicine, has,

through the able, scientific, and masterly manner of its examination and discussion by distinguished members of your Society, come to be received as a settled and fixed principle in this country, and, so far as my experience and observation is concerned, is accepted as such in criminal trials.

That admirable paper of Professor Peet, which called attention to the criminal responsibility and condition of the uneducated deaf mute, was forcibly presented by a committee of your Society to the Legislature of this State, but at so late a day in the session (after having passed the Assembly), as to fail of final passage in the Senate for mere want of time ; but notwithstanding this, the public attention was so far awakened to the wants and needs of this hitherto actually unforgotten class of unfortunates, that there is now no manner of doubt that the bill proposed by your Society will become a law during the ensuing winter.

Perhaps there is no recent instance that more forcibly illustrates the position actually occupied by this Society towards the public, and the broad field of usefulness opened for its labors, than the case of Dr. Paul Shoeppe, of Carlisle, Pa., indicted and convicted of murder in the first degree, on a charge of poisoning Maria M. Stennecke. The published testimony of the first trial awakened a profound interest throughout this country, and even in Europe, especially in medico-legal circles, and the case coming before your Society, was referred to a very able Committee of your number, who gave to the whole subject a most thorough and exhaustive examination.

Your Committee ultimately made a report which, in a masterly manner, analyzed both the evidence and the rulings and decisions of the court, and left little doubt among experts everywhere, as to the innocence of the accused. This able report found its way into the public press, first appearing in the "Medical Gazette" of this city, in the summer of 1869, and aroused a discussion upon the merits of this case that was by no means confined to this country. Upon the

second trial the accused was acquitted, and the justice of that verdict is now substantially acquiesced in by all experts. The influence of your Society in this praiseworthy and beneficent result, is perhaps best illustrated by the testimony of one of the leading counsel in that case, who, writing to the President of your Society, near the end of last September, says :

“But I must confess that, if it had not been for the thorough examination which your Society gave to the evidence in the first trial (rousing, as it did, all the medico-legal societies in this country, and many medical jurists in Germany), the preparation for the second trial would have been vastly more difficult.”

The presiding judge at that interesting trial has written your President, complimenting this body for what he styles, “the exhaustive report of your Society, upon which I drew so largely in the discharge of my official duties in that case.”

John J. Reese, Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, recently says to our officers in relation to this case, in a most interesting letter, that—

“The New York Medico-Legal Society was the first to utter a protest against that outrage. I think we all must feel gratified at the result of the second trial,” etc., etc.

One of the noblest aims of the Society, outside of its usefulness in public fields of duty, and as regards its own members, is, doubtless, to elevate the standard of careful, thorough and analytical study among experts in medico-legal cases.

Much of the criticism urged against the apparent conflict of medical testimony in important and exciting criminal trials, has been, perhaps, due to a want of a high standard of education and attainment by the medical witness upon the given case.

Before a witness should be called fully competent to testify as an expert in a cause, he should be critically and

minutely master, in all its details, of the subject upon which he testifies.

It is often urged that the apparent irreconcilability of medical testimony, is sometimes due to the peculiar course taken by counsel in examining the witness. It is more frequently due, in my experience and judgment, to an actual want of a thorough and complete knowledge on the part of the witness, of the subject under consideration.

This Society should strive to so elevate the standard of excellence among experts, as to arrive, in important legal trials, at the results which science demands; with absolute precision, so far as is possible. Too much attention and prominence cannot be given on your part, to the precise, minute and scientific training of medical experts, who shall confessedly be thoroughly and well versed in that careful and practical knowledge, necessary and essential to the intelligent and reliable examination of the issues presented in a given case.

There will be fewer cases when "Doctors disagree," according to the old adage, if the witnesses are not M. D's. simply, but if they are thorough, profound and fully competent medical experts; and a long stride will be made in the progress of the work of increasing, both the certainty, usefulness and public confidence in medico-legal testimony in important criminal trials, where the witnesses shall be only those who have most thoroughly mastered the subjects, and are best qualified to be heard upon the question involved.

To deal with all existing and arising cases involving scientific medico-legal examination or research, is the natural and legitimate mission of this body, and it is the duty, and should be the aim of every member to bring before it every important case or question, as it arises, which would be confessedly worthy of its examination and attention. In a body containing upon its roll of members so much of decided and pronounced talent from both the learned professions, organized in the chief city and metropolis of this country, we should not be worthy of the great trust committed to us, if we failed

to make the result of the labors and deliberations of this organization take front rank among kindred societies, both in this country and in Europe.

We may laudibly, besides these varied fields of labor and usefulness, so essentially and particularly within our province, aim to awaken in both professions concerned in our work, increased interest in and attention to the science of medical jurisprudence; and broaden and widen our field of labor by enlarging the members of our body, thus increasing our strength and ability to accomplish good and enlarge the area of our usefulness upon and among ourselves.

It has occurred to me that this Society might lay the foundations, the present season, for one of the most complete libraries upon Medical Jurisprudence extant. The prominent law libraries of the city are singularly wanting in what may be said fairly to be necessary and accessible, volumes on this subject. Exclusive of pamphlets, about one thousand volumes, as near as I am able to learn, are now published in this country and in Europe upon this interesting branch, and no gentleman of either of the professions can well afford to give so much space upon his shelves for all these volumes, while those having our larger public libraries in charge seem not disposed to make this branch so complete and comprehensive as we should all wish to see it.

The moderate sum of two thousand five hundred dollars would probably establish such a library upon a firm, permanent and enduring basis, if a suitable location could be found for it, and I have no doubt the managers of the Mott Memorial Library would cheerfully furnish it a home.

I shall esteem my connection with the management of your Society peculiarly fortunate if it shall result in perfecting the initiatory steps for such a library, and I should feel great pleasure in co-operating with you in so laudable an undertaking. I have great confidence that success would certainly attend a well-directed and strongly urged effort on the part of this Society for this object, if addressed to the foremost men of the two professions most interested in such

a library, to raise a suitable amount to make its future certain and assured.

Indeed, if the Society should adopt a general resolve, by universal consent, to make it the duty of every member each year to contribute at least one volume to the library, of which the Society had not already a copy, it would be such a beginning as would certainly result in the near future in a library that would be the pride and boast, not alone of the Society, but of the city of New York.

I cannot feel justified, gentlemen, in trespassing farther upon your time or indulgence on the present occasion. I shall endeavor to bring to the discharge of the duties of this place such talent as I have, and shall strive to increase and widen the influence and usefulness of this Society by all laudable and honorable means. I shall ask from you that indulgence and charity for all my mistakes and shortcomings which my inexperience in such a position make me conscious of needing ; and I trust that we may, as a Society, continue to improve and advance in the future as we have in the past, and that the Medico-Legal of the City of New York may win and deserve that prominence and place which the most sanguine of her founders desired and intended.

New York, November, 14th, 1872.

JURIES AND PHYSICIANS ON QUESTIONS OF INSANITY.*

By R. S. GUERNSEY, ESQ.,
OF THE NEW YORK BAR.

In relation to trials in courts of law, when the defence of insanity is interposed, the question has been frequently discussed, or we may say *urged*, by physicians, as to the propriety and promotion of the ends of justice and humanity of having *physicians only* to pass upon the question instead of a common jury, as in other cases.

In this discussion jurists have taken very little or no part, feeling satisfied, perhaps, that the law, as it now stands in England and America, in regard to such trials, is in a better form to ascertain the truth and carry out the design of *all* human laws—the protection of society—justice to *all*.

There is in a late issue of the *Journal of Mental Science*, by Dr. Henry Maudsley, the well-known author, an article which was re-published in the August, 1872, number of the *Popular Science Monthly*, that fairly presents the view taken by physicians on this very important subject.

He says :

“The ground which medical men should firmly and consistently take in regard to insanity is, that it is a *physical disease*; that *they alone* are competent to decide upon its presence or absence; and that it is quite as absurd for lawyers or the general public to give their opinion on the sub-

* Read before the Society, Nov. 14, 1872.



R. S. Greensey



ject in a doubtful case as it would be for them to do so in a case of *fever*."

The reasons for the law as it stands on this question are too little known among all classes of the community.

As the law now is, and has been for centuries, it allows and *calls in* the help of *experts* to aid in its own due administration. This is required in all questions arising in which there is supposed to be a peculiar knowledge or skill in any particular vocation, in any science, or art or matter requiring superior knowledge. This rule is applied to questions arising in which the *medical profession* are supposed to have superior knowledge, and insanity is one of those questions upon which physicians are allowed to testify as to their opinion of the case under certain circumstances. The principle of allowing experts to testify as to their *opinion* established the maxim that "Every person should be believed in his own art."

The *opinion* of a witness is in no case evidence to be considered by a court or jury, except when the premises upon which he founds his conclusions cannot be understood by the court or jury without a study or knowledge on the special subject, or without the *aid* of the knowledge of persons whose skill is superior to their own. In order to be competent to testify as an expert, which means qualified to give an *opinion* in courts of justice on a statement of facts presented, an extra knowledge of the particular science, skill, trade, or business, or other matters requiring special knowledge, must be shown. A witness of this character is not confined to the general rule, that he must state *facts* only, and leave the *conclusions* to be drawn from these facts to be determined by a court or jury, under oath he can give *his opinion*. These opinions or conclusions of judgment which make up such opinions of experts are the same in substance as the verdict of a jury or judgment of a court, which is nothing more than the opinion of such jury or court as to what is established by the facts in the case. This conclusion or opinion, as is that of an expert, is given under the sanction

of an oath. There is this difference, however, in the two cases; the court or jury is under oath while they are making up their opinion upon the facts in the case, and these facts upon which the opinion is predicated are also submitted to the minds of the counsel and parties. The facts were also given by the common witness under oath, upon which the jury or court makes up an opinion as to the credibility of the witness as well as of the weight of his statements. A jurymen can have no private opinion, so far as his verdict is concerned. The oath he takes is "to try the issues joined between the parties and a true verdict give, according to the evidence." All he can do is to apply his general knowledge in weighing and applying the facts or professional opinions as they are presented to him by the several witnesses. The *expert*, on the other hand, comes to the results constituting his opinion, which is to be received in evidence, from his own private study, observation and reflection, and though the facts upon which his opinion is based may be called for by the counsel, yet from the very nature of the case it is not to be expected that the jury or court will understand them. *The opinion of an expert is the private judgment of the witness given under oath.* Such testimony is regarded as of great importance, but from its peculiarity and the crude shape under which it may come before the court or jury, it is to be received with great caution. As the same kinds of guards cannot be thrown around the formation of the opinions of an expert as are brought to bear upon a jury, and the opinions of experts cannot be subject to the severe scrutiny that other evidence undergoes, this kind of evidence is not of the clear and positive character or of the value of that of *facts*. The general rule of law, as expounded by the courts, as regards the testimony of experts, is plainly expressed in the language of the court in the case of *Brehm vs. Great Western Railroad Company*, in N. Y. Supreme Court, 34 Barber, page 256, as follows:

"Great respect should be paid to the opinion of such a class of witnesses, but they are no more *controlling* than

“those of any other body of men *when speaking upon subjects which lie within the range of common observation and experience.*”

In the case of the people *vs.* Bodine, in N. Y. Court of Errors, 1 Denio, p. 281, the Court held that the opinion of a physician is not admissible upon a question respecting which unprofessional men can as well draw conclusions. Thus, where a corpse was found partially burned, and certain portions of the body covered with loose clothing were not burned, the opinion of a medical man that the person must have been dead before the fire broke out, as otherwise the covering would have been disturbed, was held *inadmissible* testimony.

In the case of Wilson *vs.* People, 2 Parker's New York Criminal Reports, p. 619, the Court held that the question whether a wound was caused by a blunt instrument or not is not a question for scientific opinion, and a surgeon could not be allowed to give his opinion on that point.

The N. Y. Court of Appeals, in Kennedy *vs.* People, 5 Abbott, N. S., p. 147, held that the opinions of the medical witnesses as to the position of the body when struck inferred from the nature of the wound they had examined, were not admissible as evidence.

Chief Justice Tindal, in Ramadge *vs.* Ryan, 9 Bingham, p. 33, said :

“Witnesses skilled in any art or science may be called to say what in their judgment would be the result of certain facts submitted to their consideration, but not to give an opinion on things with which a jury may be supposed to be equally well acquainted.”

According to the rule above stated and illustrated, should the question of *sanity* or *insanity* of a person be passed upon exclusively by physicians? This question may best be answered by inquiring into the *standard* by which the subject is to be measured. *This standard must be the average man, and hence what we call common sense—that is, a due regard to*

*the usual institutions and habits of mankind.** It is now undisputed that the brain is the seat of the mind, and that insanity is regarded as emanating from the brain, and hence may be caused by a physical disease affecting that organ. Insanity being a condition of the mind, it is, of course, oftentimes very difficult to decide in any given case whether any marked peculiarity is the result of a very active and one-sided development of the brain or of actual disease. The general principles on which all decisions of this question must be based are: *That when any feeling, passion, emotion, or even a special aptitude, becomes absolutely ungovernable, so as to make its subject regardless of his own interests or of the well-being of his friends—when, as it were, it absorbs the whole being so as to blunt the reason and conscience, and urges on to a manner of life and to special deeds that are repugnant to the average institutions of mankind—then we have reason to suspect the existence of insanity.* Although the average sentiment and experience of mankind may be an indefinite standard by which to test the sanity of an individual, it is the same standard by which physicians are to judge of it, and the same as that by which they judge that any internal organ of the body is diseased. How is it that a physician can ascertain whether his patient is suffering from dyspepsia or not? Obviously only by comparing the symptoms that the patient exhibits and the feelings of which he complains with the symptoms and feelings experienced by the average of persons who are free from dyspepsia. In precisely the same way he becomes informed of the existence of disease in all organs of the body that are hidden from actual inspection or physical examination. The brain is enclosed by a bony covering and cannot be inspected during life except in some cases of injury. Diseases affecting the brain can, therefore, only be studied through the general effects, symptoms and comparisons with other persons.†

The law presumes every man to know the consequences of

* See Reid's "Intellectual Powers of Man."

† Dr. Geo. M. Beard in Putnam's Magazine, Vol. 2, N. S., 1868, p. 513

his own acts, and is therefore responsible for them *Ferris vs. The people*, 35 N. Y., 125; *Walter vs. The People*, 32 N. Y., 141; *People vs. McCann*, 16 N. Y., 58; *Van Pelt vs. McGraw*, 4 N. Y., 110; *People vs. Orcutt*, 1 Parker Crim. Reps., 252; *Brooks vs. Barnett*, 7 Pick., 94; 1 *Greenleaf Ev.*, § 42; 2 *do.*, § 689. *U. S. vs. McGlue*, 1 Curtis C. C., p. 1; *U. S. vs. Holmes*, 1 Clifford C. C., 98.

The questions to be decided in trials where the defence is insanity are :

(1.) Was the accused insane at the time of the commission of the offence?

(2.) Was the insanity to such a degree as to render the accused irresponsible for the particular act? *

(3.) Is the evidence sufficient upon which to acquit the accused on the ground of insanity?

These questions are so blended that it is impossible for experts to separately answer any of them without taking the case *entirely* from the jury. The first one has little or no relevancy apart from the second, and the second stands upon the third, and *all* are to be measured, whether by physicians or jury, by the same standard—the *common sense of and experience among men*.

In the case of the *People vs. Lake*, 12 N. Y., 358, in New York Court of Appeals, the court says :

“Upon principle it may be doubted whether strictly medical witnesses should *ever give an opinion* upon the general question of the sanity or insanity of a prisoner, as that is a

* It appears from the Report of the Capital Punishment Commission made to Parliament in 1866, that at the annual meeting of the Association of Medical Officers of Asylums and Hospitals for the Insane, held at the Royal College of Physicians, July 14, 1864, at which were present fifty-four medical officers, it was unanimously

“*Resolved*, That so much of the legal test of the mental condition of an alleged criminal lunatic as renders him a responsible agent, because he knows the difference between right and wrong, is inconsistent with the fact well known to every member of this meeting, that the power of distinguishing between right and wrong exists very frequently among those who are undoubtedly insane, and is often associated with dangerous and uncontrollable delusions.” 1 Edmonds’ Select Cases, p. 34.

question for the jury. It is in a sense testifying to the very point the jury must decide—the general merits of the case, especially upon preliminary inquest to try the fact of insanity.” *Jameson vs. Drinkald*, 12 Moore, 148; *Rex vs. Wright, Russ & Kyr*, 456; *Norman vs. Wells*, 17 Wend., 161; *Mayer vs. Pentz*, 24 Wend., 668; *Fish vs. Dodge*, 4 Denio, 311.

In criminal cases, in order to absolve the party from guilt, a higher degree of insanity must be shown than would be sufficient to discharge him from the obligations of his contracts.

In the trial of Abner Rogers for murder in Massachusetts, Chief Justice Shaw stated the rule to be, that “a man is not to be excused from responsibility if he has capacity and reason sufficient to enable him to distinguish between right and wrong as to the *particular act* he is then doing, a knowledge and consciousness that the act he is doing is wrong and criminal, and will subject him to punishment. In order to be responsible he must have sufficient power of memory to recollect the relation in which he stands to others, and in which others stand to him—that the act he is doing is contrary to the plain dictates of justice and right, injurious to others, and a violation of the dictates of duty. On the contrary, although he may be laboring under partial insanity, if he still understands the nature and character of his act and its consequences—if he has a knowledge that it is wrong and criminal and a mental power sufficient to apply that knowledge to his own case and to know that if he does the act he will do wrong and receive punishment, such partial insanity is not sufficient to exempt him from responsibility for criminal acts. If, then, it is proved to the satisfaction of the jury that the mind of the accused was in a diseased and unsound state, the question will be whether this disease existed to so high a degree that for the time being it overwhelmed the reason, conscience and judgment, and whether the prisoner in committing the homicide acted upon an irresistible and uncontrollable impulse; if so, then the act was not the act of a

voluntary agent, but the involuntary act of the body, without the concurrence of a mind directing it." (2 Greenleaf's Evidence, § 372.)

This has been held to be the law in New York State. (*Freeman vs. The People*, 4 Denio, 9; *Willis vs. The People*, 32 N. Y., 715; *U. S. vs. McGlue*, 1 Curtis C. C., p. 1, and *U. S. vs. Holmes*, 1 Clifford, 98. See cases referred to in *People vs. Montgomery*, 13 Abb., N. S., 207, note.)

The only insanity that the law, as above stated, recognizes as an excuse for crime has been termed "intellectual insanity," (Taylor's Med. Jurisp.)

In *McNaghten's case* (10 Clark & Fin, 210 and 47 Common Law Reps.; also 2 Greenleaf's Evidence, § 373), the House of Lords, among other questions relating to this subject, propounded to the twelve judges of England in 1843, the following question :

"Can a medical man, conversant with the disease of insanity, who never saw the prisoner previous to the trial, but who was present during the whole trial and the examination of all the witnesses, be asked his opinion as to the state of the prisoner's mind at the time of the commission of the alleged crime, or his opinion whether the prisoner was conscious, at the time of doing the act, that he was acting contrary to law, or whether he was laboring under any, and what delusion at the time?"

The question was answered by Chief Justice Tindal, in which all the other judges concurred (Mr. Justice Maule absent), as follows :

"We think the medical man, under the circumstances supposed, *cannot* in strictness be asked his opinion in the terms above stated, because each of these questions involves the determination of the truth of the facts deposed to, which it is for the jury to decide, and the questions are not mere questions upon a matter of science, in which case such evidence is admissible. But where the facts are admitted, or not disputed, and the question becomes substantially one of science only, it may be convenient to allow the question to be put in

that general form, though the same cannot be insisted upon as a matter of right."

The rule is and the New York Supreme Court have so held (*People vs. Thurston*, 2 Parker's Criminal Reports, p. 49), that "a medical witness may give his opinion on a hypothetical statement of facts, and it will be for the jury to judge whether the supposed facts so stated correspond with the facts as proved."

In the case of the *People vs. Lake*, 12 N. Y., p. 358, the opinion of the court says:

"A medical witness, who has been present during the whole trial, and has heard all the evidence, but no knowledge of the prisoner, cannot, if the evidence is objected to, give his opinion as to the state of the prisoner's mind at the time of the commission of the alleged offence. In such a case, before the questions upon matters of science can arise, the witness must determine in his mind upon the truth of the evidence which he has heard, which is not a matter of science, but of fact for the jury. But he may be asked whether such and such appearances were symptoms of insanity, and whether such a fact, if it existed (and which has been sworn to), is or is not an indication of insanity. Questions of this nature can be answered without blending mere matters of science with those of fact only, upon which the jury are competent and required to pass." *McNaghten's case*, 10 Clark & Finn, 210; 67 Hansard's Parl. Deb., 728; 1 Car. & Kirwan, 130; 2 Greenleaf Ev., § 373; *Rex vs. Wright*, Russ & Ryan, 456; Cowen & Hilt's notes, No. 528; Whar. Crim. Law, 48; 1 Phil. Ev., 290; 2 Russ on Crimes, 925; Chitty's Med. Jurisp., 356 *Rosc. Cr. Ev.*, 180; 9 Mass., 225; *U. S. vs. McGlue*, 1 Curtis C. C., p. 1. "But where a medical man, conversant with the disease of insanity, has had sufficient previous opportunity, by *his own observation*, to become acquainted with the personal habits, conduct and appearance of the accused, upon authority I think he may be asked the general question, and give his opinion as to the sanity or insanity of the prisoner. In such cases it might be impossible for him to communicate to the jury

every fact and circumstance, and all the details of conduct, habits, appearance, and the other particulars upon which he had formed his conclusions, and of course he may be questioned as to these, and as to his experience, skill, etc., but if he is conversant with the disease, and has sufficient opportunity to ascertain the state of the prisoner's mind, and has formed an opinion, I think that opinion may be evidence for the jury."

A witness *not a professional expert*, is *not competent* to express a *general opinion* upon the question whether an individual was sane or insane, though when examined as to what *he himself* witnessed in regard to such individual, he may state the impression produced on his mind by what he observed (N. Y. Court of Appeals, *O'Brien vs. People*, 36 N. Y., 278 ; *Clapp vs. Fullerton*, 34 N. Y., 190), but he must state, if required, the facts from which his opinion is formed, so that the jury can judge of the value of his opinion, *Culver vs. Haslam*, 7 Barber, 314 ; *Rambler vs. Tryon*, 7 Serge & Rawle, Penn., 90 ; *Clapp vs. Fullerton*, 34 N. Y., 190).

In the *McNaghten* case, before cited, one of the questions propounded was :

"What are the proper questions to be submitted to the jury, when a person alleged to be afflicted with insane delusion respecting one or more particular subjects or persons, or is charged with the commission of a crime (murder, for example), and insanity is set up as a defence?"

The Judges answered :

"The facts of each particular case must of necessity present themselves with endless variety, and with every shade of difference in each case, and it is their (the Judges') duty to declare the law upon each particular case, on facts proved before them, and after hearing argument of counsel thereon. They deem it at once impracticable, and at the same time dangerous to the administration of justice, if it were practicable, to attempt to make minute applications of the principles involved in the answer given them by your Lordship's questions." * * * "If the accused were conscious that

the act was one which he ought not to do, and if that act was at the same time contrary to the law of the land, he is punishable, and the usual course, therefore, has been to leave the question to the jury, whether the party accused had a sufficient degree of reason to know that he was doing an act that was wrong, and *this course, we think, is correct*, accompanied with such observations and explanations as the circumstances of each particular case may require."

An expert must have some extra knowledge ; this must appear by his own statement, under oath, but the degree of skill that he must have is practically in the hands of the jury, as they are to weigh his opinions, that are given by him, in connection with his proved standing in his profession. It is therefore very important that each side should obtain the best experts possible.* The *number* allowed to be examined on each side is equal, and is in the discretion of the Court.

The opinion of one expert as to whether a certain state of facts was enough to justify another expert in the formation of an opinion is not admissible. (*People vs. Hartung*, 17 How., N. Y., p. 151). Neither can an expert be allowed to express a *doubt* as to the insanity of a person. (*Sanchez vs. People*, 22 N. Y., 147).

The duty and responsibility of an expert on questions of insanity is very important to the community, and should perhaps be more thoughtfully regarded by the medical profession and the general public. Physicians are mostly inclined to excuse many wrong acts of individuals on grounds of disease. In their arguments against the present mode of trial they claim that many persons are now convicted of crime when they should only be treated for disease (see the article by Dr. Maudsley before referred to). Juries are inclined in a too great degree, perhaps, to take the opinion of a physician of good reputation and standing as to the insanity of an individual (and none will be called for the accused unless he will so testify). This is hard to overcome by contrary testimony of

* As to compensation to expert witnesses see *People vs. Montgomery*, note, 13 Abb., N. S., p. 207.

experts, even if it can be obtained at all on behalf of the State, and if there is any doubt in the minds of the jury, they legally (?) give the accused the benefit of the doubt*—thus practically refusing to decide “when doctors disagree.”

There is no question that arises in the administration of the law where expert testimony may be less necessary, and where it should be less controlling on the jury, and where the common observation and experience of men should prevail over all theory, as in cases of alleged insanity.

The moral responsibility of *juries* in criminal cases is very great. They have the power to *acquit* the accused without regard to the evidence or the judge's charge, and the only restraints upon such a verdict in the United States are their own feelings and a regard for public opinion, and a proper sense of the general welfare and safety of the community. That well known constitutional provision founded by the common law that “no person shall be subject for the same offence to be twice put in jeopardy of life or limb,” prevents another trial or *any review* by Writ of Error or otherwise of the act of a court or jury, when a person is tried for a crime and found “*not guilty*” If he is found *guilty*, he can have a review of the proceedings, but the *State* has no right to have

* As to the presumption of sanity and the benefit of a doubt in that question, see cases cited in *People vs. Montgomery*, notes, 13 Abb., 207.

The only foundation in law for any such doctrine was derived from *Ley's* case in *Lewin's Crown Cases*, p. 239 (cited in *Freeman vs. The People*, 4 Denio, 26), which was a *preliminary examination* to determine whether the prisoner was sane enough to be placed on *trial*. The Court said to the jury: “If there is a doubt as to the prisoner's sanity, and the surgeon says it is *doubtful*, you cannot say that he is in a fit state to be put upon his trial.”

The case of *People vs. McCann*, 16 N. Y. Rep., p. 58, seemed to hold that it was applicable to *trials* where the question of insanity arose; and in *People vs. Wagner*, 2 Keyes Rep., 684, the Court of Appeals seemingly again approved of a charge to that effect, but the prisoner was *convicted* under the charge. In *Cole's trial*, 7 Abbott, N. S., p. 321, under a similar charge the prisoner was *acquitted*. The verdict of the jury in the latter case shows the absurdity of any such law, and is a solemn burlesque on its ever being applicable to trials for murder. For proper charge to jury in insanity cases see *People vs. Pine*, 2 Barb., 566; and *U. S. vs. McGlue*, 1 Curtis, C. C., p. 1.

a review of a verdict of "*not guilty*." Such verdict of a jury is supreme and final as to the offence for which the accused was tried (*People vs. Corning*, 2 N. Y. Reports, p. 9; *Duffy vs. People*, 26 N. Y., 593; *People vs. Pine*, 2 Barb., 566; *U. S. vs. Wilson*, Baldw., 78; 4 Blackstone's Com., p. 361). In criminal cases, therefore, the jury may be regarded as the barometer of the moral sense and general intelligence of the community which they represent and are morally bound to protect.* Any and every person, tried by a jury for any crime beyond petit larceny, may be acquitted on the plea of "*moral insanity*" (that is, an incapacity to distinguish right from wrong), which latter theory was introduced into medical jurisprudence by a peculiar class of *metaphysical writers*, and not by *jurists or legislators*.† (Of late "*moral insanity of the jury*" would seem to be the most proper verdict which the public should pronounce on some of their acquittals).‡ The defence of "*moral insanity*" has, nominally, had very little success in courts as an excuse for crimes.§ In cases of murder or attempts to murder, under certain circumstances, the plea of *insanity* has been quite a success in the United States within the past few years, and if it would be more so if placed under the exclusive control of the medical profes-

* Quetelet says: "Society prepares the crime and the criminal executes it."

† See the works of Simpson, Combe, Prichard, Spurzheim, Pinel and Georget.

The earliest record of a defence of that kind was in France. A Frenchman being arraigned for a capital crime, in 1821, pleaded in defence that having been born at the commencement of the French Revolution, he had imbibed all its pernicious principles, and had never been able to discriminate between good and evil, (right and wrong). The Court disregarded the plea. The man was convicted, but was only sentenced to *six years imprisonment*.—*Percy's Anecdotes of Crime*.

‡ There is more truth than irony in this remark. In the McFarland and Cole, and similar trials, the jury virtually said to themselves and to each other, "If we had been in his (the prisoner's) place, we would have done the same as he did, and so would you!" By that standard, if the prisoner was morally insane, the jury were morally insane also.

§ See Huntington's Trial for Forgery in New York City, in 1857.

sion, its immediate results by increase of crime might more strikingly show the absurdity of a milder policy towards criminals. As it has been of late, it shows the unsafety of the community of allowing a murderer to afterwards run at large under any circumstances—not so much to protect society from the same person, but as an example to deter others from giving way to similar impulses.

If any change is suggested in the present mode of trial by jury in criminal cases (which is now guaranteed by a constitutional provision), the question of insanity should be taken from a legally *irresponsible jury* and in *all* cases placed in the hands of a *responsible judiciary*, with the same rules of evidence as at present.

THE OBLIGATIONS AND RESPONSIBILITY OF AN ADMINISTRATOR OF AN ANÆSTHETIC.*

BY PROF. FANEUIL D. WEISSE, M. D.

The presentation and elucidation of this subject was suggested to me by my friend, Dr. Stephen Rogers, after we had served together upon the medical jury, at the Coroner's inquest in the case of Ann O'Shaunnessy. It will be remembered, she died while nitrous oxide was being administered to her as an anæsthetic. The want of appreciation of the obligations and responsibility of an administrator of an anæsthetic was then made glaringly prominent in the evidence presented to the jury.

From the nature of the organization of this Society, as composed of physicians and lawyers—the latter being less familiar with the fundamental principles of physiology—I will be pardoned, if for their benefit, and also for the fuller exposition of the task before me, portions of what I shall say may, by some, be thought elementary.

The anæsthetics which I propose to consider are those commonly used for the purpose of producing general anæsthesia, viz.: nitrous oxide, sulphuric ether, chloroform and bichloride of methylene. Nitrous oxide, being the one fatal administration of which suggested this paper, assumes the first rank. I shall endeavor, however, to present

* Read January 23, 1873.

the subject matter to bear with the same applicability upon the others.

Dr. E. R. Squibb, in an article on Anæsthetics (read before the State Medical Society of New York, in February, 1871), says: "The condition of perfect anæsthesia is one of the most grave and frightful conditions of life, and by suspending more than half of vitality, it comes so near to death, that it is wonderful to reflect how near the boundary line can be approached, and yet so rarely passed. The issues of life and death are narrowed to but within a few minutes. Add to this the fact that this condition rests with the physician, whether to produce it or not, and it is difficult to understand how its importance can be overestimated." This is a most fitting statement to impress the importance of our subject, and with it I invite your attention.

The obligations of an administrator of anæsthetics refer to the possession by him of a thorough knowledge of: 1st. The physiological play of those functions with which the administration of anæsthetics interferes; 2d. The *modus operandi* of each anæsthetic in the production of anæsthesia; 3d. The warning symptoms, which indicate a jeopardizing of life beyond the limits of easy restoration; 4th. The conditions unfavorable to their safe administration; 5th. The means to be applied to resuscitate a patient.

The functions and physiological conditions interfered with by a state of anæsthesia are as follows, viz.: Respiration, the composition of the blood, its circulation in the capillaries, the presiding influence of the nerve centres over the several functions of the body (more especially the lungs' and heart's action), the contractility of voluntary muscle fibre, and the contraction of the walls of the cavities of the heart.

Respiration: The ultimate objects of this function are:

1st. To introduce, by inspiration into the cells of the lungs, the air containing oxygen; which oxygen is passed from these through the cell walls and walls of the capillaries of the pulmonary artery (outside of the cells), to reach the colored

corpuscles of the blood in the said capillaries, thus oxidizing or arterializing that fluid.

2d. To allow the passage of carbonic acid gas from the serum of the blood, through the same membranous walls into the lung cells, to be exhaled by expiration.

To insure these objects, there must be a free access of a certain amount of available oxygen. I mean, by available, oxygen that can be isolated from its existing combination at the temperature of the body. The proper play of the walls of the thorax and the elasticity of the lung substance. The free flow of blood through the pulmonary arteries and veins.

Composition of the Blood: With respect to the composition of the blood, the elements which interest us are its gases. Venous and arterial blood contains three gases in a state of freedom, viz., oxygen, carbonic acid and nitrogen. Oxygen predominating in arterial, carbonic acid in venous blood. The nitrogen, being negative in its effects, does not interest us. The oxygen of the blood enters at the lungs, thenceforward it is borne by the blood corpuscles. While flowing in the terminal capillary vessels of the arterial system, it yields up this oxygen to the several tissues, nerves, muscles, etc. It is returned to the blood in the commencing venules of the venous system, after having combined with the carbon element of the tissues, having formed carbonic acid gas, which is held in suspension by the plasma or serum. I desire to lay particular stress upon the location where the carbonic acid, which afterward reaches the blood, is formed. Direct experiments have shown that carbonic acid continues to be formed at the tissues, as long as any available oxygen is present in the blood. Its formation at the tissues may be called parenchymatous, or tissue respirations.

Capillary Circulation: Interference with the capillary circulation is due to carbonic acid gas in the blood; retained in it, it renders that fluid a poison; the more so, when the quantity of oxygen is less than twenty-one per cent. The blood, thus altered in quality, no longer flows so freely

through the capillaries ; obstruction to circulation commences, and passive congestion supervenes. This state is most dangerous as affecting the pulmonary circulation, because when its capillaries are congested they stem back the blood upon the right ventricle, whose walls become paralyzed from distension. Such are the principal steps leading to so-called asphyxia ; more correctly designated by Cleveland, of London, as carbonæmia.

Influence of Nerve Centres : This generation of nerve force at the nerve centres depends upon a supply of healthy blood, in order that the determining and regulating influence of these centres should be exerted through the nerves, over the involuntary and voluntary functions of the body. If the vessels of the brain contain blood devoid of oxygen, the necessary chemical reactions evolving the nerve force would be arrested, and the unifying action of the nervous system over the animal organization would be at an end. On the other hand, if the blood in these vessels was overcharged with carbonic acid, it would cause a slackening of the blood current in the capillaries, thus leading to congestion ; which condition, as it increased, would produce dizziness, stupor, unconsciousness, and, if prolonged and marked, death by coma.

The progressive steps in the production of anæsthesia, as it is by poisoning the blood supply these agents paralyze the nervous system, are as follows :

- 1st. Paralysis of the peripheral sensory nerve fibres.
- 2d. Of the cerebral hemispheres, by which intellection is impaired and unconsciousness gradually effected.
- 3d. Of the cerebellum, by which muscular co-ordination is arrested.
- 4th. Of the spinal cord, which leads to relaxation of voluntary muscles.
- 5th. Of the medula oblongata, which presides over the heart and lungs.

This effect is the fatal one to be avoided.

6th. The sympathetic system is affected during the progress of the above effects, but its influence does not become

extinct until after all the above-mentioned nerve centres are paralyzed.

Contractility of Muscular Fibre, generally including Cardiac Walls: The contraction of muscular fibre, voluntary as well as involuntary, but more especially voluntary, depends upon the presiding stimulus of the great nervous centres transmitted through the nerves; they will not respond thereto, however, unless the capillaries of the muscle contain properly oxidized blood, free from an excess of carbonic acid.

Blood is incapable in the absence of its chief nutrient constituent—available oxygen—of effecting the necessary play of chemical affinities between it and the muscle cells. Furthermore, the presence of carbonic acid in the blood is a direct poison to the elements of muscle tissue, rendering contraction impossible. It also induces capillary stagnation in the muscle, above described.

It will be remembered that the heart, in its ultimate analysis, is a hollow muscle, divided into four cavities to subserve four special requirements; therefore, what we have said with reference to the influence of deoxidized and carbonized blood upon muscle tissue generally, holds good in every respect with reference to its influence upon the contraction of the cardiac walls, and the induction of capillary stasis in them.

Dr. Squibb has briefly epitomized these above effects, as follows: "The roughly expressed, though perhaps practical, condition essential to anæsthesia is diminished oxidation in the sensorium. It is a kind of partial suffocation or asphyxia, occurring not in the organs of respiration and circulation primarily, but far back of these, in the tissues, where the vital act of oxidation occurs. To diminish this assimilation seems to constitute an anæsthesia; to prevent it is death from narcosis."

Dr. Anstie says: "Narcosis is a physiological process in which the nervous system is deprived, by the agency of a poisoned blood supply, of its vital characteristics with greater or less rapidity, and which tends to produce general death

of the organism by means of such deprivation.
It is a purely paralyzing process."

Special Physiological Action of Nitrous Oxide Gas: As to the modus operandi of each anæsthetic, we have first to consider that of nitrous oxide gas. In this agent we have a chemical compound of one atom of nitrogen and one of oxygen. Its most important properties in our present study are:

1st. That it is not decomposable at the temperature of the body, but requires a much greater heat:

2d. That water will absorb from five-tenths to eight-tenths of its volume.

In order to produce insensibility, by inhaling this gas, a *sine qua non* is the entire exclusion of air from the air passages. After the administration is commenced, the only available oxygen which the tissues have to depend upon is that then present in the blood, and in the bronchial tubes, etc. Remembering what we previously stated—that carbonic acid is formed by tissue, oxidation or respiration—we would expect this oxygen to be rapidly consumed. Carbonic acid thus formed, added to that already in the blood, tends to induce Carbonæmia. The compound gas, nitrous oxide, alone enters the air passages; as it is non-decomposable at the animal heat of the body, it does present available oxygen for the blood corpuscles; thus the blood flowing through the pulmonary capillaries is not oxidized or arterialized. Much of the gas is taken up by the water of the plasma or serum of the blood, while at each expiration a certain amount of it is exhaled. Of itself it is innocuous to the system, and therefore its effects are but negated, viz., by excluding oxygen. Carbonic acid continues to be exhaled with the nitrous oxide, and this constituent of the expired gases has been cited as an evidence of decomposition of the nitrous oxide, whose oxygen was therefore said to support respiration. If we consider the ease and rapidity of its anæsthetic effects, and the symptoms of this condition as produced by it, the error of the availability of its oxygen to the corpuscles and subse-

quent tissue oxidation is made apparent. Nitrous oxide is most rapid in producing anæsthesia, as may be seen by the following data: At seventy-two pulsations of the heart per minute, a complete circulation of the blood is effected by about twenty-seven pulsations, requiring twenty-three seconds; the ratio of inspirations to the heart pulsations is one to four; hence at seventy-two pulsations, there would be eighteen inspirations, while twenty-seven pulsations, required for the complete blood circuit, would admit of about seven inspirations. It has been observed, that after one full properly taken inspiration of nitrous oxide, dizziness occurs; it only requires from five to seven to anæsthetize. The natural deduction from this would be—the nitrous oxide excludes the normal oxygen of the blood, and its absence is evidenced before a complete circulation of that fluid takes place. The symptoms of nitrous oxide anæsthesia are dizziness, tingling sensation at the surface of the body, as when a limb is said to be asleep, hurried pulsation of the heart and arteries, with diminished and diminishing force, unconsciousness, muscular relaxation, progressive carbonæmia, as manifested by congestions of the venous or carbonized blood at the surface of the body (more especially seen in the dark blueness of the face), and sluggish flow of dark blood during an operation. These conditions, if prolonged, cause the respiratory muscles to stop contracting, while the heart continues to beat feebly for a few moments thereafter. All the above symptoms depend upon poisoned blood supply, due to carbonæmia.

Post-mortem reveals the capillaries congested with venous or carbonized blood, particularly those of the pulmonary circulation; the blood itself is more or less fluid, the walls of the heart are relaxed, the left cavities empty, and the right distended by clots. They are the same as from drowning, hanging, etc.

The following statement made by a would-be ex-cathedra authority: "Nitrous oxide is very efficient as a restorative. It should be given gradually, in moderate quantities, so as

not to generate too much carbonic acid. Both it and oxygen are of primary importance in asphyxia. In chemical character and physiological influence they are the direct opposites, and natural antidotes to narcotizing agents and asphyxiated conditions."

These might be passed over as the ideas of an individual writer, but as they present the opinions of a large proportion of the unprofessional administrators of nitrous oxide, I place it opposite the facts above stated without comment.

I feel bounden, as an American physician, to point to this misconception of the chemistry, and the physiological and therapeutical actions of this gas as an anæsthetic. (Since the reading of this paper, there has appeared in the *London Lancet*, a letter apparently representing American views upon nitrous oxide anæsthesia, in which these same incorrect theories are advanced. In justice to the American medical profession; I take occasion to discard them, and thereby to exculpate ourselves from the semblance by our silence of holding the same.)

Special Physiological Action of Sulphuric Ether: Ether is composed of $C_4H_{10}O$.

When administered to produce general anæsthesia, it should be inhaled in the same manner as nitrous oxide, to the entire exclusion of air. In consequence, we induce with it the same conditions and train of symptoms, added to which, we have its special effect upon the tissues of the nervous system, viz.: paralyzing them, according to the degree of local access, by the circulation of the blood. This effect would seem to render it more dangerous than nitrous oxide, but the danger is lessened thereby, because the nerve centres are rapidly affected by the special paralyzing influence of the ether vapor, without necessitating the extreme carbonæmia of nitrous oxide anæsthesia. Furthermore, its special effect enables the inhalation to be suspended from time to time, in order to admit available oxygen. I would not be understood to say that ether is safer than nitrous oxide, but its special effect renders it the more desirable agent for long administrations.

The approach of death in fatal cases is the same as with nitrous oxide, expiration stopping before the heart ceases to pulsate.

Special Physiological Action of Chloroform: Chloroform, or the terchloride of formyle, is composed of CHCl_3 . This is the most powerful and the most dangerous of the anæsthetics. Its greater danger probably depends upon its three atoms of chlorine. While it produces less carbonæmia than the above mentioned agents, its special effect is to so alter the blood corpuscles as to prevent them from assimilating oxygen. This, so to speak, paralysis of the blood corpuscles is not only present at the time of anæsthesia, producing complete deoxidation of the tissues, but the influence upon the corpuscles continues for some time subsequently. This would account not only for the frequent occurrence of the cardiac syncope as a cause of death, but also for the feeble power of the heart, which continues for some time after.

Bichloride of methylene (CH_2Cl_2), which has of late years been considerably used as an anæsthetic, in possessing two atoms of chlorine, participates in the dangers of chloroform, although it has proved itself twice as safe.

What to observe during Anæsthesia: The play of those functions interfered with, should be watched with great solicitude. We should, above all, not allow ourselves to become reckless because of our familiarity with the conditions, after repeated administrations without accident.

The respiratory movements, the pulse, the color of the skin, and of the blood flowing during an operation, the pupils of the eye, should each in turn claim the undiverted attention of him who leads his patient to the very verge of the grave. If danger threatens, the respiratory mechanism will give warning by labored and short inspirations, feeble and long expirations, laryngeal stertor, sudden stoppage of the thoracic movements. A feeble pulse, though it may beat rapidly, tells of the progressively impaired force of the capillary circulation. Arrest of the pulse may occur, dependent not upon capillary stasis, but from arrest of the heart's

action, called "cardiac syncope." Chloroform is the only agent which induces this most fatal of all the dangers of anæsthesia.

The occurrence of blueness or lividity of the skin, so common when nitrous oxide is administered, as also the dark hue of any flowing blood, are omens of advancing carbonæmia, which it is our duty to restrict within certain limits. Extreme pallor (from chloroform) indicates impaired action of the heart and warns of approaching cardiac syncope. If the pupils show progressive dilatation, they tell us to admit air, as danger threatens from carbonæmia. An observation with reference to nitrous oxide, made by Dr. Amory, of Massachusetts, is most important. He tells us: "Never has an animal died unexpectedly; there is a peculiar condition produced by this gas, which, when seen, requires instant relief. Animals, at a certain stage, appear to stop all attempts at respiring, and lie motionless; if not forced to inhale air, they will die." This impresses upon us the importance to watch particularly the respiration, and not to rely too much on the pulse, in anæsthesia. It is an observed fact, that after respiration has stopped in apparent death, the heart continues to pulsate for some time before actual death supervenes.

Of the selection of patients: From what we have so far developed, we would draw the natural inference, that any condition involving imperfect respiration of heart's action, would contra-indicate, or at least add to, the dangers of anæsthesia. Phthisis pulmonalis, cancer of the lung, intra-thoracic tumors, distension of the pleura, compressing the lung, also pleuritic adhesions, impairing their elasticity, are contra-indications.

In the case of Ann O'Shaunnessy, post-mortem revealed very marked and extensive pleuritic adhesions of the right lung, which was so congested with carbonized blood as to afford the appearance of the third stage of pneumonia, while the left was free from congestion. This indicated the probable cause of death, as determined by the crippled state of the right lung from the existing adhesions. The morbid

conditions of the heart, which would contra-indicate these agents, are dilatations, fatty degenerations, or hypertrophy of the walls, and valvular lesions.

The above states of the respiratory organs would predispose to carbonæmia; the conditions of the heart would render the capillary circulation more susceptible to modification. Cerebral disease, with structural lesions, are cases to avoid, as this organ is rendered thereby more prone to the unbalancing of its functions.

Dangers of Anæsthesia: The dangers which we have to guard against may practically be reduced to two.

1st. Failure of respiration from progressive carbonæmia or paralysis of the nerve centre (the medulla oblongata), which presides over this function.

2d Cardiac syncope or arrest of heart's action (chloroform only) from paralysis of the medulla oblongata and want of oxidation of muscle cells of cardiac walls

In the first instance, while the breathing fails, the heart continues to pulsate. The essential feature, under these circumstances, is arrest of the pulmonary circulation of blood from distension and resultant paralysis of the right ventricle. The indication of treatment is to empty the right heart and restore the respiratory motions of the chest walls.

In the second condition of cardiac syncope occurring from chloroform, we find that while the circulation seems to fail before respiration, the arrest of the heart's pulsation and breathing are almost simultaneous. This failure of the heart, as a primary cause of death, presents to us the most unfavorable conditions for the successful application of restoratives.

Restorative Measures in case of the Supervention of Symptoms indicating Danger: If any of the warning symptoms enumerated above present, during the administration of either of the anæsthetics under consideration, the administrator should instantly stop the inhalation; place the patient flat upon the back, with the head a little lower than the shoulders, and admit fresh air freely; remove all the clothing from the

chest ; draw forward the tongue with a pair of forceps and hold it so ; dash cold water over the patient's head and shoulders ; give several smart slaps over the epigastric region ; make pressure with alternate relaxation over the lower part of the sternum ; apply ammonia to the nostrils, and introduce a piece of ice into the rectum. All this is accomplished in less time than it takes to tell it. If these measures do not prove successful in inducing respiration, one of two courses is to be pursued, according to the state of the heart. If the heart has stopped simultaneously with the breathing, the phrenic nerves are to be galvanized to induce respiration, effected by "one electrode over the phrenic nerve and the other in the 7th intercostal space," or they may be applied to both phrenic nerves. In either event artificial respiration to accompany the electrization. Artificial respiration may then be resorted to, to assist in the re-establishment of the breathing. On the other hand, if the heart still beats, artificial respiration may be resorted to before galvanism, which latter will probably not be needed, although it should always be tried in conjunction with artificial respiration, if that seems not to be sufficient. Galvanism to the heart and artificial respiration, applied jointly, excite both sides of the heart, and tend to restore the pulmonary circulation. Artificial respiration, which may be performed either by Sylvester's or Howard's method, although the most important means to apply, must not be resorted to injudiciously. It must be remembered that, in inspiration, blood is drawn from the extra thoracic veins into the thoracic, and thence into the right auricle ; while, in expiration, blood is drawn from the right auricle by the extra thoracic venous trunks in a reverse direction. Artificial respiration should always be commenced by expiration, in order to free the thoracic veins of blood, in the way explained, and to empty the right heart.

In cardiac syncope, galvanism of the phrenic nerves to cause the diaphragm to contract also galvanism of the heart (the right ventricle), affords the most reliable of resuscita-

tion. This is accomplished by "applying the induced current at a point over the right ventricle." It must be borne in mind that, if the heart has ceased pulsating, it is impossible to restore pulmonary circulation without first rousing the heart. One more attempt may be made, viz. : a syringe introduced into a large artery may, by suction, draw out some of the blood, which may be injected back into the artery in a pulsatory or interrupted manner.

This has been found, by experiments upon animals, to revive the action of the heart even one hour and five minutes after death. There is no precedent for using this method in these cases of emergency, but it seems to me that it might be tried as a last resource.

Responsibility : The responsibilities of an administrator of an anæsthetic agent to a fellow creature, rests : 1st. In the selection of patients ; 2d. In the purity of the article administered ; 3d. In the method of administration ; 4th. In the proper attention to the recognition of warning symptoms ; 5th. In having at hand proper means for resuscitation ; 6th. In the timely and efficient application of such means.

1st. From the train of thought we have so far pursued, we can deduce, as a natural conclusion, that an administrator of any anæsthetic should, to a certain extent, be responsible in the selection of his patients. If he is not a physician capable of judging as to the condition of a patient's respiratory organs, heart and brain, he should require a certificate from the patient's family physician, of fitness to take an anæsthetic. This applies more especially to the administration of nitrous oxide gas, which is almost always administered by non-graduates of medicine or dental surgery

I conceive that a man administering this gas should be held responsible, by law, for the life of the patient, if he has not required a certificate of fitness from the patient's medical adviser, and it should be discovered by post-mortem, that apparent contra-indicating conditions were present. The reckless manner in which this agent is daily given in our city is but another evidence of the laxity of our laws, in protect-

ing the community from those unqualified to administer remedial agents to the human organism.

2d. For the purity of ether and chloroform, the administrator can hardly be held responsible, as their preparation requires an apparatus only possessed in large laboratories, especially adapted for the purpose. At present there are certain manufactories whose names, by long experience, have been found to be a sufficient guarantee for the purity of the articles which they furnish for the physician's use.

Not so in the instance of nitrous oxide, which is prepared by the administrator, or his assistant (!) The method of obtaining the gas free from all impurities is, in itself, simple and well established. Attention and care will always insure its purity. I regard the administration of gas, in the preparation of which any of the established rules have neglected, as hazardous; and as such, the administrator should be responsible for its effects.

3d. In the inhalation of the several anæsthetics, the methods differ in certain particulars. With nitrous oxide, air should be entirely excluded, if prompt anæsthesia is desired. With ether the patient's throat and larynx should be accustomed to the vapor, then all air should be excluded. Not so with chloroform, which requires $96\frac{1}{2}$ per cent. of air to be mixed with the chloroform vapor. Such is the mixture as advised by Mr. Clover, the present English authority on chloroform.

If anæsthesia is necessary to be resorted to, especially if the patient's weak condition cannot bear the shock of the operation intended, it is very necessary that its full effect should be induced. It must be remembered that in a partly anæsthetized person, the anæsthetic, if it be chloroform, weakens the power of the heart, and thus the shock of the operation, if pain is felt by the patient, reacts upon the heart, producing fatal syncope more readily than without the anæsthesia. Such a result is not so liable to occur with nitrous oxide or ether; which latter agents have been shown by the sphygmograph (pulse writer) to increase the force of the ar-

terial and cardiac pulsations in the state of properly regulated anæsthesia.

The position of the patient is important, more especially in respect to chloroform anæsthesia. This agent should never be administered in the sitting posture, as the danger of inducing cardiac syncope is much increased thereby. With nitrous oxide and ether; that do not depress the heart, it is not so important.

4th. Above everything, an administrator of anæsthetics should be held responsible for the non-recognition of the warning symptoms above alluded to. His whole attention should be given to the state of his patient's pulse, breathing, pupils, etc. Nor should he think that those participating in the operation for which anæsthesia is induced, share this responsibility with him. He alone is the one looked to to give close attention to the influence of the agent administered. It is true that even chloroform, the most dangerous agent, has only produced one death in 2,873 administrations; ether, one death in 23,204; while nitrous oxide is stated to have been administered 300,000 times with but three deaths imputed to it. One of these occurred two hours after taking the gas, in a patient with advanced phthisis pulmonalis.

The other two cases are the case of Ann O'Shaunnessy, referred to in this paper, and that of a young lady who died in London since the reading of this paper. I do not think that in either of these cases the gas should be regarded as the sole cause of death, but the want of fulfilment of their obligations and responsibilities on the part of the anæsthetizers should bear no small share of the blame.

In spite of these figures, testifying as they do to the comparative safety of this class of therapeutic agents, I think that every administrator should perform his duties, in each instance, with the same care and undivided attention to his patient, as though he expected each succeeding case to be a fatal exception to the overwhelming rule of safety.

5th. We read, in a recent English monograph, that the English anæsthetizer admits his responsibility and his knowl-

edge of the dangers incurred, in the fact that he is furnished with "stimulants—ammonia, the galvanic battery, etc., so that they may be at hand when required."

It may be said, in answer to this, that these preparations are for the admitted dangers of chloroform, but they are at times equally necessary when the safer agents are used.

Every one will admit, who has had any extensive experience with anæsthesia, that, although he may never have had a fatal case, still he has had patients present alarming symptoms, which have yielded to judicious and well-timed restoratives at hand. Every hospital or institution where anæsthetics are frequently administered should be provided with all the necessary means, in case of dangerous symptoms. The galvanic battery should be looked to from time to time to see that it is in order. It is the administrator who should be responsible that such necessary means are present if required. It implies negligence when, in the history of a fatal case of anæsthesia, we read something like the following: "Not having a galvanic battery, it was not applied;" or "The galvanic battery was used, but it was discovered that it would not work; another battery was sent for, but before it arrived the patient died." So valuable is galvanism in threatened death during the state under consideration, that I think it indeed culpable to find one's self without an agent forethought might have provided. Its application might save a life which we voluntarily put in jeopardy; yet we carelessly and thoughtlessly fail to provide the means of safety which that jeopardizing demands.

6th. Again, every anæsthetizer should know the methods of inducing artificial respiration, not theoretically, but he should have a practical familiarity with the necessary manipulations. He should also know how to apply electricity to the phrenic nerves and right heart.

The proper means of resuscitation at hand, their timely and efficient application is none the less a responsibility. No time is to be lost; life hangs on what is done in two or three revolutions of the second hand. A mistake or omission will

be fatal, while coolness and deliberate action, that comes from the mastery of the position by knowledge, will save life.

In presenting this paper, I do not desire to invite the attacks of those who fire off their invective squibs in the columns of our daily papers, to attract the notice of an easily imposed upon community. My sole object will be attained if I succeed in intimidating some of the many who administer anæsthetics, especially nitrous oxide gas. Ignorant alike of obligations and responsibilities, these men quiet their consciences with the reflection that so many have taken it without bad consequences. Had I the power to make and enforce law, I would make a law forbidding the administration of any anæsthetic, except by or in the presence of a regular graduated doctor of medicine or dental surgeon. The majority of those who are to-day giving nitrous oxide are mere amateurs (if such a term can be applied), who understand but little of the practice and less of the theory of anæsthesia. They are, therefore, totally unfitted to apply agents to the human body, which, even in their safest methods of administration, jeopardize human life by interfering with its most vital functions.

REPORT OF THE LIBRARY COMMITTEE.*

TO THE MEDICO-LEGAL SOCIETY:

GENTLEMEN: The Select Committee, to whom was referred so much of the inaugural address of the President as related to founding a complete library of medical jurisprudence for the use of this Society, and to devise ways and means for that purpose, beg leave to report, that the want of a complete and unique library in this city, which shall contain every accessible work upon medical jurisprudence, is one felt and recognized by both professions of law and medicine.

It is, beyond a question, the duty of the Society to meet this great and pressing want; and it is, in the opinion of your Committee, within its power to do so, and at a very early day. The public libraries of this city do not at all meet, nor are they likely to provide for, this daily increasing need of the professions, and do not contain in their catalogues even a limited number of works upon this most important subject. If we should select only such volumes as are published in the English, French and German languages, it would not, it is thought, require more than 1,500 volumes, exclusive of pamphlets, to embrace them all.

The value of such a collection cannot well be overestimated by the two professions. Your Committee recommended to the Executive Committee the adoption of a resolution calling upon each member of the Society to contribute one bound volume to the library, which recommendation was unanimously approved by the Society at a recent general meeting, and contributions from the members are

* Made February 27, 1873.

now being made of bound volumes, in pursuance of this general resolve upon that subject. The number of volumes necessary to make the library perfect and complete is relatively so small that, in the judgment of your Committee, it is the duty of the Society to take immediate steps to complete and equip the library, and at once. We recommend that a general appeal be made to the members to subscribe a sufficient sum to complete this library. We also recommend that the Committee be authorized to promise such persons as contribute to this library who are not members of this Society the free use of the library.

Your Committee beg to call the earnest and immediate attention of members to the action of the Society in regard to the contribution of volumes, and ask that these donations be at once made and sent to Mr. Clark Bell, at his office, No. 20 Nassau street, who has consented temporarily to furnish shelves for such volumes as may be contributed, until more complete and proper arrangements can be made for the permanent location of the library. Your Committee are preparing complete lists of all accessible volumes on these subjects for the use of members in selecting volumes for contributions. It is suggested by your Committee that such members as prefer not to be embarrassed by the selection of a volume, in compliance with the general resolution, may send such sum of money as they choose to the President, Mr. Clark Bell, who has consented in each such case to take charge of the selection of the volume, and place it to the credit of the person making the contribution.

All of which is respectfully submitted.

(Signed,)

R. S. GUERNSEY,
STEPHEN ROGERS, M. D.,
GEORGE H. YEAMAN,
DAVID DUDLEY FIELD,
WILLIAM A. HAMMOND, M. D.,
JOHN C. PETERS, M. D.,

Committee.

Dated New York, February 20, 1873.

MEDICO-LEGAL TOXICOLOGY.*

BY EUGENE PUGNET, M. D.

MR. PRESIDENT AND GENTLEMEN :

To render justice to so important a subject as medico-legal toxicology would take up more time than your much esteemed Society can afford to spare, and, moreover, would require a much abler exponent. I will, therefore, limit myself to a general and practical exposition of this—probably the most important branch of medical jurisprudence.

Medico-legal toxicology is properly divisible into two branches, the first of which appertains to the province of the *medical jurist*; the second to that of the *legal chemist*. It is the duty of the former to ascertain and determine the nature of the symptoms and of the anatomical lesions caused by the ingestion of a poison. The latter has to detect the presence of a toxic substance in the organs of a cadaver, the egesta of a patient, or in the immediate vicinity where the poisoning has taken place. Also to determine its exact nature.

The medical jurist must have a thorough knowledge of the physiological, therapeutical, and toxical actions of poisons, and of the lesions they may cause.

The legal chemist requires that practical experience which enables him to conduct his researches and analyses with skill, for a mere theoretical knowledge of analytical methods is insufficient, especially when there are no *data* as to the nature of the poison. By failing to take every precaution he may conduct his experiments in such a manner as to lead him to believe that he has found a poison, when in reality there is none, or to destroy all evidence of its existence if one were present. These very facts have but recently occurred in this

* Read February 27th, 1873.

country. In one case a person escaped the gallows on the very eve of his execution. In another it became necessary to legally acquit an accused party, who is to-day under a moral, I firmly trust and believe, an unjust cloud. The law was obliged to acquit, but human nature, which is more perverse, denies that which the former gives to every alleged criminal—the benefit of the doubt—for there are many who would rather believe in the old Scotch verdict of *not proven*.

Criminal and accidental poisonings may occur in three ways, viz. :

1. By being introduced into the alimentary canal.
2. By inhalation.
3. By hypodermic or subcutaneous injection.

Occasionally there may be an unsuccessful attempt. The family physician who *ex-necessitate* may be called upon as a medical expert is generally the first to see the case. A great deal depends upon his judgment and knowledge, especially as it may only be suspected without tangible evidence, or else the attempt has been made and the evidence is clear or obscure. In the first case he may allay the fears, the alarm and the distrust in a previously happy family; or he may foster the seeds of distrust, and cause an unjust suspicion to be cast on one or more individuals who may be entirely innocent of any such attempt. In the second case, by his circumspection he may be able to further the ends of justice and the cause of humanity by unraveling an obscure chain of evidence, or prevent the concealing of that which is clear. How can he do it? Simply by his knowledge of physiological chemistry, which every physician should have some knowledge of, as it teaches him the actions of remedies and toxic agents on the economy. For instance, in a case of supposed poisoning by arsenic, this toxic might not give rise to gastric disturbances, but other symptoms, such as puffiness of the face, congestion of the eyes, fullness of the head might manifest themselves. These are not in themselves sufficient evidence; but physiological chemistry teaches us that when arsenic is absorbed into the system in one of the three ways

previously alluded to, that is eliminated by the skin and kidneys. Then, by repeating M. Chatin's experiment of raising a blister on any portion of the body, the presence of arsenic can be readily detected in the serum or fluid contained in that blister. Its presence can also be detected in the urine, even four weeks after its administration.

In poisoning by strychnine, the symptoms of which are somewhat analogous to the convulsions of tetanus and of cerebro-spinal meningitis, the strychnine is mostly eliminated by the kidneys, and its presence can be detected in the urine. I have had the opportunity of verifying this quite recently in a case of accidental poisoning by this agent. By this means unjust suspicions might be allayed or a crime exposed.

Again, a thorough knowledge of the action of medicines is imperative in cases of wounds made by an assassin, as it is frequently necessary to administer opium, or its alkaloid morphine, to meet certain indications in the treatment of the victim; and the counsel, in his earnest zeal in the defense of his client, may question the treatment the victim has received. Thus opium gives rise to certain phenomena which are called *narcotism*. This agent, like all other remedies, has two actions. Its primary period is that of stimulation; its secondary one that of sedation. The first usually lasts from half to one hour. The length of time varies with the proportion of the dose and the *idiosyncrasy* of the patient. It is marked by an increased frequency of the pulse and restlessness; presently you pass into the second stage, the period of sedation. The pulse becomes slower and regular; the respirations lessened in number and regular; the inspiration prolonged; the pupils become contracted, and the patient drops into a quiet slumber. But if the case progresses unfavorably the interval between each respiratory act becomes greater, the patient cannot be roused, and dies in about twelve hours comatose. That is the usual course following the administration of one dose. But when the remedy is given in *divided* doses, and at *short* intervals, the stim-

ulation is prolonged, the pulse increased in frequency, the respirations are *not diminished* in number, the pupil contracts, and the patient becomes quiet. He may occasionally rouse himself and call for a drink, and drop off again into a semi comatose condition. The toxic effects will then only manifest themselves *an hour or two* before death. This result is due to the *cumulative* action of opium. The fatal termination may also be prolonged an hour or two, the most marked symptom, the contraction of the pupil, continuing until the patient is in *articulo-mortis*. On an empty stomach the free administration of stimulants will stimulate the action of opium. Post-mortem examinations do not always reveal pathological changes of the brain and its meninges.

The classification of poisons has always been somewhat puzzling to the medical jurist. Primarily they are divisible into two grand divisions, the organic and the inorganic. The former are derived from the animal and vegetable kingdoms; the latter from the mineral. This division is the one accepted, and rationally so, by the legal chemist, as it forms the basis of his investigations. The medical jurist necessarily adopts another classification, which is based on the clinical phenomena and pathological changes which may manifest themselves. We thus have :

	{	Strong Mineral Acids	{	Sulphuric Acid.
				Nitric Acid.
				Muriatic Acid.
I. Corrosives. . .	{	Vegetable Acids.		Oxalic Acid.
		Alkalies	{	Strong Alkalies.
				Alkaline Carbonates, &c.
II. Simple Irritants.	{			The above diluted.
				Lime.
				Zinc.
				Silver, &c.

III. Specific Irritants.....	{	Arsenic. Mercury. Antimony. Phosphorus. Iodine.
IV. Neurotics.	{	Narcotics Opium and its active principles.
	{	Cerebro-spinal { Hyosciamus. Belladonna. Stramonium. Calabar Beans.
	{	Spinal. { Digitalis. Aconite. Prussic Acid. Tobacco. Hemlock.
	{	Vaso-Motor....Hellebores.
	{	Anæsthetics. . { Chloroform. Chloral. Bichloride of Mytheline. Ether. Nitrous Oxide. Amyline.
	{	Convulsives.....Nux Vomica, Brucia, Strychnine.
V. Asphyxiants.....		Noxious Gases.
VI. Abortives.....		Ergot, Savine, etc.

In a paper of this kind it would be impossible to enter into a full and detailed account of the action and the various lesions these various poisons may cause.

The corrosives destroy the tissues they come in contact with by their chemical action, causing an intense pain, accompanied with a burning sensation.

The simple irritants cause, primarily, irritation ; secondarily, inflammation, which may prove fatal.

Oxalic acid in its pure form causes a corrosion of the mouth, œsophagus and stomach. When largely diluted it does not act as a corrosive ; but, if given in sufficient quantities, causes death by a specific action on the brain and the spinal centres. It has been known to cause death in ten minutes. The smallest fatal dose recorded was one drachm. Taken in small doses, and continued for some time, it will simulate a disease known to physicians as oxyluria.

The specific irritants act primarily as local irritants, but have a secondary specification, and are those that we mostly have to deal with in this country. In cases of acute poisonings they cause lesions of the alimentary canal, but in those of slow poisonings these are wanting.

The Neurotics.—This large and important class fortunately has not, as yet, occupied a prominent place in toxicology. But the day is not far distant when we may be called upon to investigate cases of criminal poisonings made with them.

One of the most remarkable of the recorded cases of criminal poisonings with one of these agents is the celebrated Bocarme case, in which the Count de Bocarme poisoned his brother-in-law with nicotine, the active principle of tobacco, although there was no process known in chemistry by which an unknown substance could be searched for, and its nature ascertained. An expert was fortunately found who was equal to the occasion. I allude to Mr. Stas. By a simple process he detected the poison, and on this chemist's unimpeachable and conclusive evidence the Count de Bocarme was convicted and executed. This process is now known throughout the world as Stas's. A few modifications have been made to it, but the basis of it is essentially the same.

Poisons are sometimes met with in their natural state, either in the stomach, intestines, or else in vials in the room of the victim or of the assassin. It will then only be necessary to identify them by their chemical properties or their botanical or zoological features, in case the assassin has had recourse either to vegetable or to animal substances. The problem is then readily solved ; if an analysis is necessary it

will be limited to a small number of reactions, and does not offer any serious difficulties. But when it becomes necessary to detect a poison mixed with the organic substances found in the alimentary canal, or even absorbed into or intimately united with the structure of the various organs, the problem is then more difficult. Unless there are evidences foreign to chemistry, which places us at once on the track of the poison, or that the researches are only necessary to prove the existence of a particular substance in the incriminated matter, a rapid and positive result can then be more readily arrived at by the ordinary methods.

But when the expert chemist is called upon to detect an unknown poison he is frequently at a loss to know exactly how to proceed, for the treatises on chemistry do not give him any general method to conduct his investigations. Great is his responsibility, for he may become unwittingly the cause of the execution of an innocent party, or of the acquittal of a great criminal, who, like a Borgia or a Medicis, may go on revelling and adding to his crimes. As I have already stated, the expert chemist only deals with the organic and inorganic divisions of toxics. When the poisons are mixed with organic substances it is absolutely necessary to separate them, as these substances might mask their reactions. For the detection of an inorganic poison, a metal, for instance, the most simple means is the destruction of the organic matter; but when the poison is itself organic, all evidence of its existence might be destroyed by such means.

The expert chemist who is to conduct a chemical investigation should always be present at the post-mortem, to receive the contents of the organs, so that a thorough examination of the various organs can be made as they are removed, thus immediately ascertaining the nature of the lesions, and those of each special organ, for, owing to the rapid progress made in science, it has a direct relation and bearing on the class of poison which may have been used.

When the legal chemist has taken charge of the various organs, and of the contents of the alimentary canal, all of

which should have been placed in separate jars and carefully sealed, he should, unless he has unequivocal data as to the nature of the poison, divest himself of any impression he may have in regard to it, and conduct his examination as if searching for an unknown substance—in other words, arrive at a definite result by *exclusion*.

The organs should be analyzed separately—not together—as when a poison such as arsenic has been introduced in the body after death, it will not be carried by imbibition into distant organs unless it has been injected into the blood-vessels. Again, when a body is exhumed six months or more after death, the surface may be covered with arsenic derived from the surrounding soil, and if the skin is not in a perfect state of preservation it will penetrate into the tissues beneath it.

It is true, however, that the arsenic in the soil of eight or ten cemeteries has been found to exist as an insoluble salt. This would form an important point in the investigation, as, by treating the remains with distilled water for twenty-four hours, and arsenic were found in the water, it would warrant the conjecture that the arsenic was derived from the body itself; but if the water failed to extract any, and that recourse was had to chemical means to extract it, it would, on the contrary, warrant the belief that the arsenic emanated from the soil, and not from the cadaver. Four cases have arisen covering this point. The first, Julie Leclerc, who was tried at Metz, in Lorraine, in 1853, for the murder of a man named Daudin; the second one, D., tried for the poisoning of his wife in Cote d'Or, France, in 1853; the third, Stephens, tried, convicted and executed for the murder of his wife in this city; and the fourth, Heggi, tried in this city for the murder of Seigfreid, the jury disagreed, and the accused is awaiting a second trial. In the case of Daudin arsenic was found in the soil immediately beneath the coffin, but none in the soil above or around it; neither in the pluvial water which reached the coffin. It was, therefore, evident that the arsenic emanated from the body, and no

from the soil. Julie Leclerc was found guilty, and, owing to extenuating circumstances, sentenced to imprisonment for life. D.'s case was the most remarkable of the four; he confessed that he had given his wife arsenic. The experts testified that they had found arsenic in the organs of the body, but the government ordered a second examination by other experts. The latter found arsenic in the soil surrounding the coffin; also in the skin and superficial muscles, but none in the deeper tissues. As the liver, kidneys, spleen and pancreas had been consumed in the previous analysis, they were only able to examine a remnant of the rectum, the examination of which yielded negative results. The court then ordered the experts to examine the so-called arsenical spots obtained in the previous analysis. This was done by all of them in the presence of an expert, acting as *amicus curiæ*, and were found to be *antimonial* instead of *arsenical*. The prosecuting attorney abandoned the case, and the jury acquitted the accused. This was a righteous verdict, for the analysis by the first experts was *erroneous*, and that of the second experts showed that the arsenic detected on the skin and superficial muscles was derived from the soil.

Again, a person may die by poisoning, and the expert chemist fail to find any evidences of a poison. If that were the case it should not warrant the acquittal of the accused party, as the poison may have been eliminated, provided life were prolonged a sufficient time. It will then depend on the medical jurist to make the matter clear by the symptoms and the pathological changes. If the egesta of the victim have been saved, or can be scraped off the floor, etc., the legal chemist will then, in the majority of cases, clinch the matter by detecting and determining the presence of a poison in them.

Poisoning by hypodermic or subcutaneous injections are fortunately unknown to criminal law; but the same knowledge which led DeBocarme to make use of nicotine may lead others to attempt them with this more subtle and dangerous method, as apparently less liable of being detected. But

science is no more at a loss than in a case of ordinary poisoning, for physiological chemistry teaches us that all substances, remedial or toxic, have a tendency to be eliminated by various organs, especially the kidneys. It is therefore in these organs that we must search for these toxics, and determine their identity.

A medical expert was once asked, in a case of alleged narcotic poisoning, if he had found any evidences of it. He answered in the negative, stating that an analysis of the stomach would have been necessary to determine it. Had the stomach been examined, it is more than probable that not a trace of poison would have been found there, as more than twelve hours had elapsed between the administration of the last dose by the stomach and the fatal termination of the case; besides, more than half had been administered by hypodermic injection. The expert evidently forgot that morphine is almost entirely eliminated by the kidneys, and if the patient had not had a free flow of urine, that the morphine would be found in the kidneys.

It has been urged at various times that the medical expert should state the precise amount of a toxic necessary to produce death. This is simply absurd, for no man living can conscientiously swear as to the precise dose; it all depends on the idiosyncrasy of the patient and the manner in which it has been administered.

When the expert chemist has completed his analysis, if he finds that the poisoning has been committed with an inorganic poison, such as arsenic, antimony, etc., he should bring *the metal into court and present it to the jury*; and there should be a sufficient quantity of it, in order to submit it to all the tests necessary for its identification.

With the organic poisons, the legal chemist would find it, in the large majority of cases, a rather difficult task; in fact, almost an impossibility, as the organic poisons are much more active, and a smaller dose fatal. Their presence can be proved by various tests which are reliable, but their very nature would tend to prevent their complete isolation in suffi-

cient quantities for presentation to the jury. In cases of this kind the cumulative evidence would have to be relied upon ; but even now micro-chemistry and spectral analysis are of invaluable assistance to us.

Heretofore we have not had any well described method by means of which an accurate analysis could be arrived at by *exclusion*. The one given to the profession by M. Naquet, of Paris, which I will demonstrate, is a perfectly clear, logical, rational and comprehensive one. It can be carried through with less than three grains of a toxic, and appears to fill this void. The *sine qua non* of this method, like that of all others, rests upon the purity of the re-agents required for the purpose.

The suspected matter should be divided into three portions, one of which is set aside for physiological experiments in case the chemical analysis failed to reveal the presence of a toxic ; the two other portions serve to divide the analysis into two stages. On one portion of the incriminated matter a series of experiments, appropriate to place the expert chemist on the track of the poison, are made. These the *indicative* experiments may sometimes become *determinative* and give *definite* results. If this series only affords indications, advantage is taken of it as a guide in conducting the determinative experiments on the second portion, thus arriving at a definite conclusion.

Indicative Experiments.—The matter to be operated on may be either alkaline or neutral, or else acid. As the method of conducting the investigation will have to be modified according to the reaction which may present itself, it will be necessary to describe each in succession.

The Matter is Acid —After placing the substances in a retort furnished with an abducting tube, which plunges into a solution of nitrate of silver, they are gently heated in a water bath ; if the substances contain a cyanuret, hydrocyanic acid is immediately set free, and a precipitate of cyanide of silver will form in the solution. Should no result be obtained, water should then be added to the retort, and the mixture

boiled for about an hour, care being taken to collect the disengaged vapors into a properly cooled receiver. When that time has elapsed the matter remaining in the retort is thrown on a filter, the product of the distillation then mixed with the filtrate; the residue is washed with boiling concentrated alcohol, and the washings are also added to the liquid previously obtained. The incriminated substances are thus divided into a soluble and an insoluble portion.

On examining the liquid portion it will be found that a certain quantity of animal matter has been coagulated; this should be separated by a filter. The filtrate should then be placed under a jar and above sulphuric acid, which will reduce its volume by absorption, in case it should be too large. With this precaution a liquid is obtained, which may contain either mineral or organic acids, or else mineral or organic bases. To detect either of these substances the operation will then have to be conducted in the following manner:

1. A current of hydro-sulphuric acid is made to pass through the solution. As the solution may contain an organic acid, the gas may not cause a precipitation of all the metals. Still it will cause the precipitation of some of them. Should a precipitate form, it will have to be separated by filtering, then redissolved in nitric acid, or aqua regia if the former is not sufficient. Finally, researches are made on this solution by the ordinary methods for the *metals* it may contain.

2. The liquid acted upon by the hydro-sulphuric acid, and filtered if necessary, should be divided into two portions. To one a solution of soda and ether, and to the other a solution of potassa and ether are added. After having well shaken them the ether is poured off, and if it has taken up anything, fresh portions of ether are successively added until the liquids are exhausted. The ethereal liquids are then mixed, and *alkaloids* searched for. (But as there are some alkaloids which are insoluble in ether, it would be well to subsequently shake chloroform with the liquids.)

3. If the preceding operations have been fruitless, and

that a precipitate was formed by potassa and soda, and that this precipitate was not dissolved by the ether (or the chloroform), it is then separated by a filter, washed, redissolved in an acid, and on the solution thus obtained appropriate experiments are made, to lead to the detection of the *mineral base* it may contain.

4. If until now nothing has been found, one of the portions of the liquid is taken, for instance the one treated with potassa, and the *acids* which exist in the form of salts are searched for. For this purpose the liquid is divided into two equal portions, respectively known as A and B, and treated separately.

Portion A is then evaporated to dryness, and the residue divided into four portions: In one, hydrofluoric acid is searched for; in another, nitric acid; in the third, oxalic acid; and in the fourth acetic and formic acids.

Hydrofluoric Acid.—A portion of the residue mixed with sulphuric acid is heated in a platina crucible, and covered with a watch-glass which has been waxed, and on which lines or drawings have been made. After heating the crucible for a few minutes, the glass is removed, and should there be any white lines or tracings left on the glass after the removal of the wax, it is a positive indication of the presence of a *fluoride* in the analyzed matter.

Nitric Acid.—If a second portion, heated with a mixture of sulphuric acid and copper, gives rise to golden vapors, which, on being led into a solution of sulphate of iron, cause it to assume a brown color, which will turn to a yellow by the addition of sulphuric acid; and, when led into a solution of sulphate of narcotine, causing it to assume a handsome red color; then there is no doubt that nitric acid, as a *nitrate*, is present.

Oxalic Acid.—On heating a third portion of the residue with sulphuric acid, and by collecting the disengaged gas, which must then be analyzed to ascertain if it contains equal portions of the oxide of carbon, and of dry carbonic acid. However, this reaction would not be sufficient in the

presence of an organic acid, and it must be ascertained that the barytic precipitate, as will hereafter be shown, gives it also, for other organic substances might yield oxide of carbon and carbonic acid; which would involve the risk of admitting or claiming the presence of oxalic acid, when there would not be any present, and of its passing undetected when present.

Acetic and Formic Acids.—By distilling the fourth portion of the residue with dilute sulphuric acid, then by saturating a small portion of the liquid thus obtained with a base, and neutralizing it, and ascertaining that it becomes red on the addition of a persalt iron. The liquid should then be divided into two equal portions, and on heating one of them with an admixture of bichloride of mercury, metallic mercury will be formed, and carbonic acid capable of bleaching lime water disengaged, in case any *formic acid* is present. Then, by digesting and heating the second portion with litharge (semi-vitrified oxide of lead), a basic salt of lead will be formed, and only then, in case *acetic acid* is present. The solution of this salt will turn reddened litmus blue.

PORTION B.—This portion of the liquid should be saturated with nitric acid, then a sufficient quantity of ammonia added to saturate the acid, and the excess of ammonia expelled by heat. Finally, nitrate of baryta is added to the liquid; should a precipitate then form, it is collected in a filter, and search made in it for sulphuric, phosphoric, oxalic and boracic acids. The filtrate is set aside for the subsequent search for hydrochloric, hydrobromic and hydriodic acids.

Oxalic Acid.—A portion of the barytic precipitate is then treated in a similar manner to the portion of the residue left on the evaporation of the liquid A when searching for oxalic acid.

Sulphuric Acid.—The entire precipitate is then submitted to the action of dilute hydrochloric acid. Should there be an insoluble residue left, as it can only be sulphate of

baryta, it is proof positive of the existence of a *sulphate* in the analyzed liquid.

Phosphoric Acid.—By the addition of an excess of alum, then of ammonia, to the liquid formed by redissolving a portion of the precipitate in hydrochloric acid, a precipitation of phosphoric acid as a *phosphate* is caused by the alum. This precipitate is then collected on a filter, and the filtrate set aside for the search of boracic acid. On boiling the precipitate with a solution of the silicate of potassa, a double decomposition takes place, and the silicate of alumen is precipitated, and the phosphate of potassa formed and held in solution. The excess of silica is then separated from the liquid by the addition of dilute hydrochloric acid. After filtering the liquid, the presence of a *phosphate* can be determined by the addition of the nitric acid solution of the molybdate of ammonia to the filtrate, which would then assume a yellow coloration, if a precipitate did not form.

Boracic Acid.—The liquid separated from the alumenic precipitate is then evaporated to dryness, and mixed with sulphuric acid and alcohol; and by igniting the latter, the presence of *boracic acid* would be revealed by the green color of the flame.

As the liquid, separated from the precipitate obtained by the nitrate of baryta may contain hydrochloric, hydro-bromic, and hydriodic acids, it can be ascertained, by first determining that the addition of nitrate of silver causes a precipitation. Then by carefully collecting and washing the precipitate, and decomposing it in boiling liquor potassa, iodine, bromine and chlorine can be searched for in the solution thus obtained.

Hydriodic Acid.—By pouring a solution of starch and concentrated nitric acid into the liquid, the presence of an *iodide* will be immediately revealed by the liquids assuming a blue color.

Hydro-bromic Acid.—If there is no hydriodic acid present, chlorine and ether are then poured into a second portion of the liquid, and by shaking the mixture *bromine* will at once

cause the ether to assume a brown color. But if iodine were present, and it was advisable to search for bromine, it would then be necessary to acidify the liquid with hydrochloric acid, then to shake it with an admixture of sulphuret of carbon and of chloride of lime. Under these circumstances *iodine* would cause the sulphuret of carbon to assume a *violet* color, which would disappear on the addition of more chloride of lime; whilst if *bromine* were present the sulphuret of carbon would preserve a persistent *orange* color, even after the disappearance of the violet coloration due to the iodide.

Hydrochloric Acid.—As the substances operated on always contain some, it is needless to search for it; at the furthest, a portion of the liquid corresponding to a known quantity of matter might be precipitated; the precipitate, then dried and weighed, and converted into a chloride by heating it in a current of chlorine gas, then weighed again. The proportion of the chlorides found in the matter would thus be ascertained, which might lead to the presumption of poisoning by hydrochloric acid, provided that this proportion was very large.

Hydro-sulphuric Acid.—If the precipitate first obtained in the solution of nitrate of silver was *black*, the presence of a sulphuret might be suspected. By treating a portion of it with hyposulphite of soda, which would dissolve all excepting the sulphuret of silver. Then, by calcining the latter with nitrate of soda, a sulphate would be formed readily recognizable by its property of forming, with the salts of baryta, a salt insoluble in the acids.

This analysis more frequently yields sulphates, chlorides, carbonates and phosphates. Note should be carefully taken of the most abundant kind of salt. This should also be done in case acids not frequently met with, such as oxalic and tartaric acids, are found. The quantity of these substances added to the primary acidity of the liquid and of the absence of other toxic substances, are as many facts calculated to lead to the presumption of poisoning by an acid, also to indicate which one should be suspected of having been

made use of in the execution of the crime. In the determinative experiments the poison can then be searched for without having the fear of destroying others which might exist in the substances experimented upon—as their *absence* would have been *established* or their *presence determined* beyond a doubt.

5. When the search for the acids is completed, the liquids from which they have been successively extracted should be evaporated to dryness. Whatever organic matter they may contain, then destroyed with nitric acid, and *soda* searched for on the product thus obtained, as *none* had been introduced into this portion of the liquid. If found in considerable quantity, beyond a normal proportion, it would give rise to the belief that the individual had been poisoned with *soda*, and that an acid appropriate to *mask* the poison, or as an *antidote*, had been administered.

Acetic acid should then be carefully searched for in the determinative experiments, as it is the one usually made use of as an antidote to the alkalies.

6. Whatever may have been the result of the preceding researches, the second portion of the liquid, the one treated with *soda*, is then evaporated to dryness, and the organic matter present destroyed, either with nitric acid or with aqua regia. The residue, then taken up with water, and in the aqueous solution thus obtained all the mineral bases can be searched for by the ordinary processes, amongst others *potassa*, which has not been introduced into this portion of the liquid, and it is therefore evident that its presence was not due to the manipulations.

7. When the dissolved portions of the incriminated matter have thus been examined under every possible aspect, the examination of the portion left on the filter is then entered upon.

All the organic matter in it should be *destroyed* with aqua regia, the liquid thus obtained evaporated to dryness, the residue then heated until all the nitric acid is expelled, the vapors being carefully collected in a cool re-

ceiver. The residue then taken up by water; this solution filtered, and sulphuric acid added to the filtrate. Should a precipitate of sulphate of lime, of baryta, or of strontia, form, it must be collected on a filter, and its exact nature ascertained. The filtrate then placed in Marsh's apparatus, worked with an amalgam of potassium and mercury, which does not present the objections that can be made to the zinc filings, for it matters not how clever the expert chemist may be, or how thoroughly he may have tested his apparatus, run with zinc. He cannot be positive that the zinc filings are free from arsenic unless he has gone through with an elaborate preparation of the zinc before making use of it. With one there is no possibility of a doubt, as the mercury, owing to its fluidity, is readily tested, whilst with the other there is a possibility of a doubt, and it would be criminal on the part of the counsel who did not insist upon his client's having the benefit of that *doubt* which the law in its mercy grants him. With the apparatus thus prepared *arsenic* and *antimony* are searched for.

It is now of the utmost importance to separate the arsenic from the antimony in case both are present. Several processes have been tried, but it is not my intention to discuss them. The most simple and reliable one is the one also suggested by M. Naquet. When the two substances are present, arseniureted hydrogen and antimoniated hydrogen are formed, and, by passing these gases through a solution of nitrate of silver, contained in a Liebig's ball tube, a double decomposition takes place, the antimoniate of silver is precipitated, and arsenious acid formed and held in solution. After having thoroughly exhausted the suspected liquid, the contents of the ball tube are poured on a filter; the precipitate remaining on the filter thoroughly washed; the washings then added to the filtrate. A slight excess of hydrochloric acid is then added to this mixture. This causes the precipitation of any excess of silver, which is then separated by filtering; and, after thoroughly washing the residue,

the filtrate and the washings are placed in Marsh's apparatus, and search made for *arsenic*.

The metallic precipitate, containing the antimoniate of silver, should then be calcined in a porcelain crucible, with a mixture of nitrate and carbonate of potassa, for about three-quarters of an hour; then withdrawn from the fire. When the mass has cooled it should be treated with hydrochloric acid until the liquid resulting from this treatment does not leave any residue on the evaporation of a drop of it. A current of anhydrous-sulphurous acid is then made to pass through this liquid, until it preserves the odor of the gas; then boiled for about an hour, thus expelling the excess of the acid; finally introduced into a Marsh's apparatus, and search made for *antimony*.

2. Whether these poisons are found or not, the liquid, still acid, is withdrawn from the flask; a current of chlorine then caused to pass through it for several hours. Then *mercury* may be searched by Flandin and Danger's apparatus, the essential feature of which consists in the decomposition of the liquid by means of the galvanic current, the mercury, if present, depositing itself in the negative electrode. This is the most reliable and delicate test for the detection of mercury. As cold dilute sulphuric acid does not act on mercury, its presence cannot be attributed to its having proceeded from the amalgam contained in Marsh's apparatus; but, in order to remove all doubts, the experiment should be repeated with a portion of the matter reserved for the determinative experiments.

3. Whatever may have been the result of the preceding searches, the liquid which has been successively treated with Marsh's apparatus, and Flandin and Danger's, is then searched for other metals by the ordinary processes.

THE SUSPECTED MATTER IS NEUTRAL OR ALKALINE.

An acid reaction is then given to it, either with tartaric or oxalic acids, and the remainder of the operation carried

on exactly as the preceding one. Potassa, soda, lime, baryta, and strontia are then searched for with great care—their presence or absence determined—thus ascertaining to which one of these bases the poisoning can be attributed ; also obtaining the necessary indications for the determinative experiments.

DETERMINATIVE EXPERIMENTS.

The *indicative* experiments may be in many cases *determinative*. Such would be the case if any alkaloid or metal had been isolated, unless the latter were mercury, and had been found under the circumstances which have just been detailed. It is therefore evident that there is no longer any doubt to be maintained. But if neither metal nor alkaloid have been detected, and that salts of potassa and soda are found in abundance, and that the liquid was *primarily acid*, there is every reason to suspect poisoning by an *acid* ; and that when the liquid was *primarily alkaline*, and that an acid reaction had been given to it, there is every reason to suspect poisoning by *alkalies*. When the liquid is *neutral*, but more or less colored and odoriferous, and that bromides and iodides are found, it warrants the suspicion of poison by *bromine* or *iodine*.

Search must therefore be made either for one of the acids, one of the caustic alkalies, bromine or iodine, according to the ordinary methods in the matter set aside for that purpose. But when there is reason to believe that the poisoning has been committed with two or more acids, a fact which must be determined, which is done in the following manner : After having boiled the organs and their contents with water and coagulate the animal matter with alcohol, the mixture is filtered ; the filtrate then distilled until it becomes of a pulpy consistency. The acids contained in it are thus divided into two classes : the acetic, nitric, hydrochloric acids, and sulphuric acid, which is partially volatile, will be condensed in

the *receiver*, and can be determined by the ordinary processes.

Absolute alcohol then added to the *residue* contained in the flask, the whole well shaken and filtered. The addition of acetate of lead will cause the precipitation of sulphuric, phosphoric and oxalic acids. The precipitate then separated and diluted with water, and decomposed by causing a current of hydro-sulphuric acid to pass through it, thus setting the acid free ; and it can be determined by its characteristic reactions, as previously stated.

If there were any reason to believe that the liquid contained a mixture of oxalic and sulphuric acids, the evaporation must not be carried so far. By agitating the moderately concentrated liquid with *ether*, the latter would take up these acids and yield them again on evaporation. The oxalic acid would be recognized by means of sulphate of lime, and the sulphuric acid by the oxalate of baryta.

Finally, if the above experiments failed to reveal the presence of *phosphorus*, the latter should always be sought for in a portion of distinct matter, if nothing else had been found.

CONCLUSIONS.

It would therefore be advisable in all cases of suspected poisoning to act upon the presumption that the nature of the poison is unknown, unless the data are clear and unequivocal ; for the *ipse dixit* of the medical jurist should have *no more weight* than *circumstantial evidence* with the legal chemist, if the latter wishes to base himself on grounds which the *legal acumen* of the counsel, aided by a sound knowledge of medical jurisprudence, will not strike from under him, destroying his reputation as an analytical chemist, leaving him and the debris of his analysis as incongruous a mass as the wall which falls under the blows of a pick

The medical jurist and legal chemist of the present day, by becoming votaries and exponents of science, incur an additional responsibility. Every mistake they make is cast up

against their science, which is making giant strides towards *positivism*. Besides, they cast an unjust, and unmerited reproach on their professional brethren. The medical expert, whether he appears for the prosecution or the defence, owes it to his profession, to his brethren, to testify according to his honest convictions. His answers should be categorical if possible. In other words, he should act as *amicus curiæ*, By acting otherwise he *prostitutes his profession*.

The *expert* investigations, such as were conducted in the Wharton-Ketchum trial, should not be tolerated in criminal cases. It casts a taint, a suspicion of over-zealous partisanship, on the proceedings.

Nor should the Coroner's *ex parte* post-mortem investigations be tolerated. Not that I would cast a reflection on any of the gentlemen he might select to conduct the investigation; but the law allows the accused in the final trial to produce witnesses in his own behalf on every point save this—it is unjust, and might be the cause of a legal murder. Schoeppe would never have been convicted on his first trial if the investigation had been conducted in the presence of a sworn expert, representing the interests of the alleged murderer, or acting as *amicus curiæ*.

Therefore, as a representative of my profession, I respectfully recommend to the consideration of your honorable Society the propriety of petitioning the Legislature to pass a law covering this point, which might be the means of saving an innocent person, and would, *a fortiori*, lead to the conviction of the criminal. In making this appeal to you I feel that I am advocating the cause of justice and the cause of humanity, for I am not the only member of my profession who believes that one or more criminals, alleged criminals, have been executed on insufficient medico-legal investigations. Moreover, it would spare us the renewal of such indelible *stigmas* on the administration of American criminal law as the Schoeppe, Wharton-Ketchum, and Wharton-Vanness trials.

LEGAL RESPONSIBILITY IN OLD AGE,

BASED ON

RESEARCHES INTO THE RELATION OF AGE TO WORK.*

BY GEORGE M. BEARD, A. M., M. D.

GENTLEMEN: I propose to occupy the hour that you give me to-night in discussing—so far as is possible in a single paper—the important subject of “Legal Responsibility in Old Age.”

This subject has, I believe, never before been presented to this society, and nowhere, so far as I know, has it received the scientific and exhaustive consideration that is demanded by the need of our times, and never before has the method that I will introduce to-night been brought to bear upon it.

My theme naturally divides itself into three heads:

1. What is the average effect of old age on the mental faculties? In other words, what is the law of the relation of age to work?

2. To what extent is the average responsibility of men impaired by the change that the mental faculties undergo in old age?

3. How shall the effects of age on the mental faculties be best brought to the attention of our courts of justice?

To the answering of the first inquiry—the relation of age to work—I have devoted several years of research. The result of my investigations, if I am suffered to arrange them, will, in proper time, be published in a complete and elaborate volume, wherein all the important and practical relations of the subject will be discussed impartially and exhaustively. It will be possible for me, on this occasion, to do no more than

* Read March 27th, 1873

state the general result of my investigations, and only so far as may be necessary to give a scientific basis for the study of the effect of old age on legal responsibility.

It is proper for me to state that the researches of which I am now to give a partial abstract, which have been several times presented before the Long Island Historical Society, have been published in the *College Courant*, and, in a condensed form, several times republished abroad, and thus have been brought to the attention of an audience which, though limited in number, is yet best of all capable of appreciating the force of fact and reasoning.

While the views presented are in the highest degree unpopular, no one has yet pointed out serious error in the calculations.

Method of Ascertaining the Law of the Relation of Age in Work.—It would be easy to ascertain the law of the relation of age to work by the mere expression of an opinion, and thousands of opinions have been expressed upon it. It would be comparatively easy to prepare a list, on the one hand, of great names who have done their best work in youth; and, on the other hand, of those who have done their best work in old age; but partial statistics, prepared to form a theory, can never settle these questions—cannot satisfy the inquirer, nor relieve the doubter; nor have any convincing power whatever; and the opinions formed upon them will live no longer than the time required in uttering them.

If physiology alone could solve these problems—if it were possible for the microscope to so reveal the complex mechanism of the brain, and if chemistry could so analyze its intricate and manifold constituents as to make it a human possibility to determine, from the brain itself, both the general and special functions of which it is capable, and the modifications which these functions undergo by age, by disease and external conditions—then, by a sufficient number of post-mortem examinations, these hard questions could be scientifically answered; but, unfortunately for these methods of investigation, physiology and pathology are but just born,

and neither our children nor our children's children can expect to see them exact and complete sciences, as we have no recognized mental dynamometer by which to measure the comparative cerebral force of the living and the dead. The true and only way by which the subject can be approached is by studying the history of human achievements and comparing the age at which has been done the best work of the world.*

Reputation and Ability.—Reputation is, on the whole, an approximately correct, as it is the only test of ability of men who have long been before the world. It is hardly necessary to say that in differentiating the various classes of merit we should aim to represent not the opinion of any one but the settled opinion of mankind. The number of illustrious names of history is by no means so great as is currently believed. As the visible stars of the firmament, which, at a glance, appear infinite in number, but, on careful estimate, are reduced to a few thousand, so the galaxy of genius, which appears interminable on a comprehensive estimate, presents but four or five hundred lights of immortal fame. Mr. Galton, in his "*Hereditary Genius*," states that there have not been more than four hundred great men in history. I should be inclined to make a more liberal estimate, and bring four hundred and fifty, or perhaps five hundred into the catalogue. I do not forget that Goethe has said that "fame is no sure test of merit, but only a probability of such." The converse of this statement, that obscurity is no sure evidence of demerit, but only a probability of such, would come more nearly to the truth. Brain

* Mr. Proctor, in an essay on this subject, to which I shall presently refer in detail, has anticipated me in the publication of a thought which I had supposed was peculiarly my own. It is that one of the best *dynamometers* for testing the growth of the mind is found in our capacity for appreciating one of Shakespeare's plays. "As the mind grows its power of appreciating Shakespeare increases; and the great advantage of this particular test is that the mind cannot overgrow it. It is like the standard by which the sergeant measures recruits, which will measure all heights, not failing even when giants are brought to be measured by it."

force, like all other great forces—light, heat, and electricity—is evolved in enormous excess of the apparent and immediate need of the world, and but a fraction is ever directly and especially utilized. Only in rare instances is special or general talent so allied with influence, or favor, or fortune, or energy that commands circumstances, that it can develop its full functions. Wisely says Emerson, “Things are in the saddle and ride mankind.” When, through circumstances, or in spite of circumstances, the power of any man becomes permanently felt in the world, we may be sure that it is a reality and not a sham; we are not sure, however, but that near him live in permanent obscurity a thousand men who, through ill favor or ill health, shall keep their great forces forever in reserve. The stars we see in the sky are but mites compared with the infinite orbs that shall never be seen; but no star is a delusion—each one means a world, the light of which very well corresponds to its size and distance from the earth and sun. In the great galaxy of history, sham reputations go out in darkness like the meteors that flame across the heavens; but every abiding reputation—every name that shines along the ages—must have great deeds, and great thoughts to feed it.

The method by which I sought to learn the law of the relation of age to work was to study in detail the biographies of distinguished men and women of every age.

I have prepared a list embracing nearly all of the greatest names of history, whose lives are recorded in sufficient detail to be of value in such an investigation, and have noted the age at which they did the original work by which they have gained their fame. I have noted the ages at which philosophers have founded and announced their systems; at which divines and religious teachers have originated their creeds, and have been most effective as preachers; at which statesmen have unfolded their highest acts of legislation, of diplomacy and reform; at which men of science have made their greatest discoveries and written their best works; at which generals and admirals have gained their greatest vic-

tories, and carried on their most successful campaigns ; at which lawyers have led the bar, and physicians made their explorations in medicine, and artists have painted their masterpieces ; at which musicians have composed and performed their most illustrious creations ; at which architects and engineers have planned and executed the greatest monuments to their memories ; at which actors and orators have been at the zenith of their power, and at which teachers and professors have led eras in the service of education. From these data, which, though not absolutely exhaustive, are sufficiently so for a final and convincing settlement of the questions involved, I have derived the period, the decade, and year of maximum productiveness, and the various grades between this and the period, the decade, and the years of the least productiveness.

I have not overlooked the difficulties, the complications, and the various forms of error involved in such an investigation, and have endeavored, so far as possible, to calculate and provide for them.

The lives of some great men are not sufficiently defined to differentiate the period, much less the decade or the year of their greatest productive force. Such lives are either rejected, or only the time of death and the time of first becoming famous are noted ; very many authors have never told the world when they thought out or even wrote their masterpieces, and the season of publication is the only date that we can employ. These classes of persons, it will be seen, tell in favor of old rather than of young men, and will make the year of maximum production later rather than earlier, and cannot, therefore, be objected to by those who may dislike my conclusions. In an investigation so wide, and in the arrangement of facts gathered from so many sources, there is room for many numerical errors in regard to the dates of births, of deaths, and of special performances. It is believed that these errors, though they may be numerous, are yet slight, and will, in the main, counterbalance each other.

In a number of instances the honors that have been accorded to distinguished men—as knighthoods, baronetcies, memberships of learned societies, or of legislative bodies—have been noted, and inasmuch as public honors, especially those which depend on kings and queens, princes and politicians, come late, and are very far behind the true deserts, the dates represented by them will tell against young men rather than for them. For those who have died young, and have worked up to the year of their death, the date of their death has sometimes been regarded as sufficient. Great difficulty has been found in proving the dates of the labors of the great names of antiquity, and, therefore, many of them are necessarily excluded from consideration.

Finally, it should be remarked that the list has been prepared with absolute impartiality, and no name and no date has been included or omitted to prove any theory. The men who have done original or important work in advanced age, such as Dryden, Radetzky, Moltke, Theirs, De Foe, have all been noted, and are embraced in the average.

General Results of the Investigation.—

The golden decade	is between	30	and	40.
The silver	“	“	40	“ 50.
The brazen	“	“	20	“ 30.
The iron	“	“	50	“ 60.
The tin	“	“	60	“ 70.
The wooden	“	“	70	“ 80.

Seventy per cent. of the work of the world is done before 45, and eighty per cent. before 50. The golden decade represents about twenty-five per cent. more dates than the silver. The difference between the first and second half of the golden decade is but slight. The golden decade alone represents nearly one-third of the work of the world.

The best period of fifteen years is between 30 and 45. The advantage of the brazen over the iron decade—of 20 and 30 over 50 and 60—is very striking, and will cause surprise.

There is considerably more work done between 35 and 40 than between 40 and 45.*

The average age of the great personages from whose lives the law is derived is not far from *sixty-six years*. A very large number of them lived to be over seventy. On the average the last *twenty* years in the lives of original geniuses are unproductive.

The broad fact, then, to which these statistics lead us is, that the brain follows the same line of growth, maturity and decay as the rest of the body; that the nervous, muscular and osseous systems rise, remain and fall together, and that the received opinion that the mind, of which the brain is the organ, develops and matures later than the power of motion or of physical labor and endurance, is not sustained by the facts of history.

Distinction between Original and Routine Work.—In making these investigations the distinction between *original* and *routine* work must be rigidly maintained. The quantity of work done by the aged is greater than that done by the young; in quality the advantage is on the side of youth. Original work requires enthusiasm; routine work experience. In society both forces are needed—one makes the world move, the other keeps it steady. That the best test of brain force is *original* work will be questioned by none.

Men are at their best at the time when enthusiasm and experience are most evenly balanced. This period, on the average, is from 38 to 40. After this period the law is that

* Since this paper was written there has appeared an essay of very exceptional interest as well as of remarkable ability on "The Growth and Decay of Mind," based in part on these researches of mine, and has attracted wide attention. It is from the pen of the eminent astronomer Richard A. Proctor. The essay originally appeared in the *Cornhill Magazine*, for November, 1873, and was republished in *Littell's Living Age*, No. 1,538; and also in the *Popular Science Monthly*, for January, 1874. The citations which Mr. Proctor there makes were from a very condensed report of my lecture before the Long Island Historical Society, on the "*Decline of the Moral Faculties in Old Age*." It will be seen that the qualifying considerations to which he refers have been in this paper considered by me in detail.

experience increases but enthusiasm declines. The people unconsciously recognize this distinction between the work that demands enthusiasm and that which demands experience, for they prefer old doctors and lawyers, while in the clerical profession, where success depends on the ability to constantly originate and express thought, young men are the more popular, and old men, even of great ability, are shelved or neglected. In the editorial profession original work is demanded, and most of the editorials of our daily press are written by very young men. In the life of almost every old man there comes a point, sooner or later, when experience ceases to have any educating power.

Exceptions to the Law.—To this general law, as to nearly all other general laws, there are many individual exceptions, which, however, are a part of the law, and help to raise the average. The most marked exceptions to the law are found in the realm of imagination; some of the greatest poets, painters and sculptors, such as Dryden, Bryant, Richardson, Cowper, Young, De Foe, Titian, Christopher Wren and Michael Angelo, have done a part of their very best work in advanced life. The imagery both of Bacon and of Burke seemed to increase in richness as they grew older.

On the other hand, in the realm of reason, philosophic thought, invention and discovery, the exceptions are very rare. Nearly all the great systems of theology, metaphysics and philosophy are the result of work done between twenty and fifty. The exceptions are both ways, and there are some who, like Napoleon, reach their prime long before thirty-eight.

Application of the Law to Animals and plants.—The same law applies to animals. Horses live to be about twenty-five, and are at their best from eight to fourteen; this corresponds to the golden decade of man. Dogs live nine or ten years, and are best for the hunt between two and six. Plants also appear to be subject to the same law. Fruit bearing trees, so far as I can learn, are most prolific at a time of their average life corresponding pretty nearly to the golden and silver de-

cade of man. Children born of parents one or both of whom are between twenty-five and forty, are, on the average, stronger and smarter than those born of parents one or both of whom are much younger or older than this. The same fact applies to the breeding of horses, dogs, and probably of other animals.

It should be noted also, that in women, the procreative function ceases between forty and fifty, just the time when the physical and mental powers begin to decline, as though nature had foreseen this law and provided that the world should not be peopled by those whose powers had fallen from their maximum.*

Egg-laying Capacity of the Hen.—The law is very well illustrated by the egg-laying power of the hen. It has been estimated that in an average lifetime an average hen will lay from 500 to 700 eggs, thus distributed: first year, 16 to 20; second year, 100 to 120; third year, 120 to 135 (the golden

* In considering the age of the female sex, Dr. Beck says: "It is generally conceded that no female can be impregnated, in our own climate, *under* the age of *thirteen*, nor *above* that of *fifty*, provided she has been previously barren. This, however, is only to be taken as a general rule, subject to exceptions. The presence of menstruation, in every country, constitutes the state of puberty, and the irregularity of its occurrence is noticed by most practitioners. It is to be regretted, however, that so few have given the result of their observations. Out of 450 cases investigated at the Manchester Lying-in Hospital, in England, the following results were obtained.

The menstruation began in the	Sixteenth.....	76
eleventh year in	Seventeenth	57
Twelfth	Eighteenth	26
Thirteenth	Nineteenth	23
Fourteenth	Twentieth	4
Fifteenth		95

Again, out of 10,000 pregnant females registered at the same hospital—
 436 were upwards of .40 yrs of age 9 in their 50th year.
 397 from..... 40 to 45 yrs. of age. 1 in her..... 52d "
 13 in their..... 47th year. 1 in her 53d "
 8 in their 48th " 1 in her 60th "
 6 in their..... 49th "

Mr. Robertson also adds that, so far as he could ascertain, particularly in the three cases above fifty years of age, the catamenia continued up to the period of conception." See Beck's Med. Jurisp., chapter on "Pregnancy."

period) ; fourth year, 100 to 113 ; fifth year, 60 to 80 ; sixth, year, 50 to 60 ; seventh year, 35 to 40 ; eighth year, 15 to 20 ; ninth, 1 to 10.

The Moral Faculties Subject to the same Law—The generalization, broadly stated, is that in all organic beings there is a period when the productive power is greatest, and this is not late but early.

We can go a step further, and assuming—what nearly all cerebro-physiologists of recent times will admit—that the brain is the organ of all the mental faculties, submit the moral nature to the same investigation. It does not follow that all people suffer decline of the moral faculties in old age ; with many their last days are their best days. Some, like Charles James Fox, the English orator, after a youth and manhood of dissipation, settle down to an old age of quiet and dignified virtue.

When a man declines in moral principles he does not necessarily become a horse thief—a loss of active moral enthusiasm is frequently all that is noticed

There are three causes of moral decline in old age :

1. The over exercise through life of the lower at the expense of the higher nature. Thus it has been long observed and admitted that conscience becomes less sensitive, and that vanity, avarice and ambition, and a disposition to petulance and irritability increase with years. This is the physiological cause.

2. Disease of the brain, or of other parts of the body that react on the brain. The diseases to which the brain is liable are infinite. Strange results may follow from even slight injuries to the head, or mere molecular perturbations of the cerebral structure. Striking cases have come under my own observation—a kick from a horse has destroyed memory of numbers, of houses and locality ; a bereavement has destroyed memory of names ; millionaires, once liberal, in old age have grown absurdly penurious ; hemorrhages of the brain, and various disorders of the cranial cavity have gradually or suddenly made the clever foolish, the patient petu-

lant, the hopeful despondent; have caused men to change almost instantaneously their religious and political doctrines.

3. Intellectual decline. The intellect is the eye of conscience, and when that is blinded by disease or the decay of age, men cannot distinguish the true path, even though they desire to do so. Intellectual decline sometimes has the reverse effect, and favors the development of a kind of negative morality, for positive vice requires intellectual force as much as positive virtue, and when the intellect declines the man is obliged to be virtuous.

The two last causes are pathological. The pathological conditions that are most peculiar to the brain of old age are hemorrhage from rupture of the cerebral arteries, thrombosis, sclerosis, meningitis, congestion, anemia, neurasthenia and softening. Death in the aged is more frequently a process than an event. A man may begin to die ten or fifteen years before the mortal coil is entirely shuffled off. Men die as trees die, slowly, and frequently at the top first.* As the moral and reasoning faculties are the highest, most complex and most delicately developed of human nature, they are the first to show signs of cerebral disease; when they begin to decay in advanced life we are generally safe in predicting that, if neglected, other faculties will, sooner or later, be impaired. When conscience is gone the constitution may soon follow.

In private life illustrations of this theme are numerous

* As the corrected proofs of this paper are passing through the press, there come tidings of the death of Agassiz; this event is the last act of a long tragedy. To his friends it is well known that Agassiz began to die several years ago. His death can be hardly regarded as a loss to scientific research, for he long ago ceased to be productive. So far as he lives in the future of science it will be mainly for the *original* work that he did before he reached his *fortieth* year. The intemperate manner of his opposition to the theory of evolution by which he was so rapidly winning favor among the thoughtless and ignorant, and so rapidly losing favor among the conscientious and scholarly, may find its partial, if not complete explanation in the exhausted condition of his brain.

enough, but in a public discourse the lives of celebrities, living and dead, serve best to enforce these views.

The decline of the moral faculties in old age may be illustrated by studying the lives of the following historic characters: Demosthenes, Cicero, Sylla, Charles V., Louis XIV., Frederick of Prussia, Napoleon (prematurely old), Voltaire, Jeffries, Dr. Johnson, Cromwell, Burke, Sheridan, Pope, Newton, Ruskin, Carlyle, Dean Swift, Chateaubriand, Rousseau, Milton, Lord Bacon, Earl Russell, Marlborough, Daniel Webster and Horace Greeley.*

In some of these cases the decline was purely physiological, in others pathological; in the majority it was a combination of both.

Very few decline in all the moral faculties. One becomes peevish, another avaricious, another misanthropic, another mean and tyrannical, another exacting and querulous, another sensual, another cold and cruelly conservative, another excessively vain and ambitious, and others simply lose their moral enthusiasm, or their moral courage, or their capacity of resisting temptation and enduring disappointment.

In studying the decline of the moral faculties there is little chance for statistics, as in the study of intellectual decline, for morality is so relative a term, and has about it so much of indefiniteness, that it defies arithmetic.

The best average barometer of mental force is memory, in all its varieties, and that memory early begins to decline, all are willing to admit. But decline in memory in old age is only the advance guard of an invading army that sooner or later is to devastate the brain.†

* In the volume now in preparation I shall give in full detail the precise nature of the moral decline in most of these cases.

† The *Medical and Surgical Reporter* for July 12, 1873, contained a carefully written editorial article on these researches, in which the writer claimed that I had made a fatal error in not taking into account the tables of mortality; and further stated that the tendency of my theory was materialistic and melancholy. To that editorial I made the following reply, which was published in the *Reporter* for August 2, 1873. Inasmuch as it has a general application, and may forestall other objections, I republish the whole letter.

Illustrative Cases.—Under this head I append a few biographical facts, which are taken at random from the collection of nearly one thousand names that I have analyzed. They are given merely to show the method of investigation.

Eds. Med. and Surg. Reporter :

In your editorial of July 12, commenting on my researches into the relation of age to work, you say that the value of my statistics is impaired, if not destroyed, by the fact that I did not take into account the tables of mortality, and did not consider the well understood fact that the majority of persons living in this world are under forty years of age.

Now, if there is any question connected with these researches to which I have given more attention than any other, it is to this very question, *the average age of those who have done the original work of the world.*

In all cases where I study a life of a person, not living, I take the age at death. So far as I have gone in my investigations, the average age of the great men of history, taking the names as they come, and including, of course, those who, like Byron, Raphael, Mozart, etc., die young, is *over sixty.*

I have published my researches on the longevity of brain workers so frequently that it seems hardly necessary to repeat them. They can be found in the old numbers of the *Hours at Home* and of the *College Courant*, of New Haven. I may say, further, that in connection with this treatise on age and work, and side by side with it, and, indeed, as a part of it, I have for years been preparing a work on Longevity, and that the researches for the two works are carried on together, and aid and supplement each other.

Still further, I may say that the conclusions which I announced in my very first articles on longevity—that brain workers, for various reasons, live longer than muscle workers, that clergymen live longer than any other great actively working class in modern society—which statements were ridiculed and disputed, as these statements in regard to age and work are now, have since been confirmed by a number of observers, and have been accepted by the Clergymen's Life Insurance Company of New York.

I speak of these facts to show that so far from neglecting, I have given special attention to the longevity of the original workers of the world, and that my conclusions, though utterly opposed to the once popular notions, have been in a manner accepted.

That the most important original work of the world has been done by a few hundred, or at least a few thousand men, no one who has given much thought to the subject will deny ; and if the average age of these, at death, is over sixty—not far from sixty-five, as I have proved—and if the original work of these men was done *early*, and not late in life, then the demonstration of the law of the relation of age to work is complete. With the rest of the human race we have simply nothing to do. Their expectation of life, their average longevity, may be subjects of interest, but in this investigation we need to know only *the tables of mortality of the original workers whom we study.*

The statistics of Dr. Jarvis, a gentleman, by the way, to whom I have been

Elsewhere I have arranged all the names under their appropriate classes—as scientists, commanders, theologians, physicians, inventors—and have found that there was a great difference as to the time in which the different occupations did their original work. Almost all inventions and original discoveries are made by boys or young men ; so, also, journalists, preachers and explorers do their best work in youth

indebted during all my investigations on the subject of longevity, have no possible bearing on the question under discussion. I may state that a very common mistake of those who criticise new facts and generalizations, is to *assume* that their originators generalized without taking into account all sides of the question, and all the qualifying considerations. The subject of age and work I have endeavored to approach from every point of the compass. To one exception to the law that my opponents usually adduce, I can bring up five or ten. The general objection to which you refer, that the aged have less stimulus to originate work than the young, I have considered in elaborate detail, and its various bearings. It is, I think, the most important objection that has been brought against my theory.

To the materialistic and sentimental objections that you array at the close of your article, there is, perhaps, no occasion for me to reply. The same objections have been brought, under various forms, against every radical advance in thought, from the birth of science until now, and they will continue to be brought, under similar or different forms, so long as man shall attempt to think and science shall continue to advance on the earth.

Arguments against scientific facts or theories, drawn from their real or apparent tendencies, seem to be more appropriate for a political or a religious than for a scientific journal, to be more worthy of the 14th century than the 19th, and to be more suited to the longitude of Spain than of America. Scientific discoveries are simply the thoughts of the Creator revealed through His creatures, and if their tendencies are evil, the Creator and not the discoverer is responsible.

At the present time a number of thoughtful observers are investigating this subject, both in its scientific and practical relations. To these I may offer three suggestions :

1. That they rigidly observe the distinction between *original* and routine work. It is the original, creative, pioneering work that tests brain power.
2. That they first collect their facts, and theorize afterwards.
3. That in all their biographical and historical reading this subject be kept constantly in view.

In closing this communication, I wish to express my appreciation of the courtesy and candor with which you have conducted the discussion.

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or middle life ; while musical composers and men of letters have, in some striking instances, originated great things in advanced age. In medicine, nearly all the exploration, experiment, discovery and original work is done by young men between twenty-five and forty ; the medical practice of the world is mainly in the hands of those between forty and eighty. In the practice of law, which is a science of precedents, original work is not expected ; judges and diplomats are usually old, but the most successful pleaders are usually the young and middle aged.

As a lad of 16, Lord Bacon began to think independently on great matters ; at 44, published his great work on "The Advancement of Learning ;" at 36, published twelve of his Essays ; and at 60 collected the thoughts of his life in his "Organum." His old age was devoted to scientific investigation.

At the early age of 29, Descartes began to map out his system of philosophy, and at 41 began its publication, and at 54 he died.

Schelling, as a boy, studied philosophy, and at 24 was a brilliant and independent lecturer, and at 27 had published many important works ; at 28 he was professor of philosophy and arts, and wrote his best works before 50.

Dryden, one of the greatest exceptions to the law, did his best work when comparatively old ; his "Absalom" was written at 50 ; and his "Alexander's Feast" when he was nearly 70.*

Dean Swift wrote his "Tale of a Tub" at 35, and his "Gulliver's Travels" at 59.

Ruskin wrote the first part of the principal work of his life, "Modern Painters," at 28, though it was not completed until seventeen years afterward, when he was 45. "Seven Lamps of Architecture" appeared at 30, and "Stones of

* Since writing the above I have observed the following in one of the essays of Montaigne : "God is favorable to those whom he makes to die by degrees ; its the only benefit of old age, the last death will be less felt and painful—it will kill but half or quarter of a man."

Venice" at 33. None of his latter works have taken as deep a hold of the popular heart, and are so sure of being remembered by posterity as those which were composed before he was 35.

Thackeray, after an unsuccessful youth, wrote "Vanity Fair" at 36 and 37, and "Esmond," which he regarded as his best work, at 41. But though he matured so late, he was but 51 when he sadly remarked to a friend: "Dickens and myself have worked out our vein, and what is more, the people have found it out." The judgment of the literary world would now accord with that of Thackeray.

Charles Dickens wrote "Pickwick" at 25, "Oliver Twist" and "Nicholas Nickleby" before 27, "Christmas Chimes" at 31, "David Copperfield" at 38, and "Dombey and Son" at 35. Thus we see that nearly all his greatest works were written before he was 40; and it is amazing how little all the writings of the last twenty years of his life took hold of the popular heart, in comparison with "Pickwick" and "David Copperfield," and how little effect the most enormous advertising and the cumulative power of a great reputation really have to give a permanent popularity to writings that do not deserve it. If Dickens had died at 40 his claim to immortality would have been as great as now, and the world of letters would have been little, if any, the loser. The excessive methodical activity of his mature and advanced life could turn off works with fair rapidity; but all his vast experience and all his earnest striving failed utterly to reach the standard of his reckless boyhood. His later works were more perfect, perhaps, judged by some canons, but the genius of "Pickwick" was not in them.

Emerson published the first series of his essays at 38, and the second at 4; and that these essays had been in his thoughts for years is evident from his statement that from his boyhood he had desired to write an essay on "Compensation." "Representative Men" appeared at 46; "English Notes" at 53; "Conduct of Life" at 56, and "Society and Solitude" at 67. It is, I believe, the view of many of his

warmest admirers that the cream of his thought is embraced in his earlier essays, which were written between 25 and 40, and that none of his subsequent writings are so sure of immortality as these. He reached his zenith at 40 and 45. Since that period close observers have seen a positive decline of his great powers, which, during the last five years, has been almost painful.

Colt was a boy of 21 when he invented the famous weapon that bears his name ; and Goodyear began his experiments in rubber while a young man of 24, and made his first success at 38, and at 43 had brought his discovery to approximate perfection.

Eli Whitney invented the "cotton gin" at 27, and between 33 and 41 discovered and perfected his method of making firearms.

Fulton at 28 had begun to study steam navigation, and was 42 when he made his first success on the Hudson.

Deyesse, the inventor of the needle-gun at 42, had, after various experimenting, at 49 constructed his first-breach-loader.

Wendell Phillips was but a boy when he made his first great speech in Faneuil Hall ; he reached his zenith just before or during the earlier part of the war, and now has for six years been very perceptibly on the decline.

Benjamin Disraeli became famous as the author of "Vivian Grey" at 21 ; at 32 entered Parliament ; at 30 wrote "Coningsby" ; at 42 had overcome his diffidence and was famous as a great debater, and published "Lothair" at the advanced age of 65.

The name of Bichat is one of the greatest in science, and he died at 32.

Graefe, the greatest of ophthalmologists, and one of the greatest men of history, was famous at 25 ; at 31 had a world-wide fame, and died at 42.

Pinel at 35 had made an important investigation in science ; at 40 took charge of an insane asylum and introduced his humane method ; at 46 he gained a prize for an essay on

the subject, and at 47 was appointed to the Bicetre, where he introduced a great reform in the treatment of the insane.

Turner at 15 exhibited to the Royal Academy, at 27 was an academician—painted his best works, “the Middle Period,” in the years between 39 and 45. The works of the last twenty years of his life are inferior.

Handel at 19 was director of the opera at Hamburg ; at 20 composed his first opera ; at 35 was appointed manager of the Royal Theatre at London ; at 25 composed “Messiah,” and at 66, “Jephtha,” and in old age and blindness his intellect was clear, and his power of performance remarkable.

Luther early displayed eloquence, and at 20 began to study Aristotle ; at 29 was Doctor of Divinity, and when he would refuse it, it was said to him that “he must suffer himself to be dignified, for that God intended to bring about great things in the Church by his name ;” at 34 he opposed the “Indulgencies,” and set up his ninety-five propositions ; at 37 he publicly burned the Pope’s bull ; at 47 he had completed his great task.

Thomas Jefferson at 31 wrote a remarkable paper entitled “Summary View,” and at 33 wrote the Declaration of Independence ; at 58 he was President, and delivered a remarkable inaugural. But, although he lived to the advanced age of 83, he stated that he desired to have inscribed on his tombstone “Author of the Declaration of Independence, and of the Statutes of Virginia and Religious Freedom,” and both of these tasks he had completed at 35.

Von Moltke at between 66 and 70 directed the operation of the great war of Prussia against Austria and France.

Nelson at 39 was distinguished at the battle of St. Vincent, and was knighted and made Rear Admiral. At the age of 40 he had been actually and personally engaged with the enemy one hundred and twenty times, and had gained the “Battle of the Nile,” and was 47 at Trafalgar, where he was killed in action.

It is a fact of very great interest that the experiment and speculations that have led to the pretty generally adopted

theory of the correlation of forces were made by young men.

Rumford at 31 was a very successful administrator in Bavaria ; at 45 published the experiments on what he had been engaged, on heat, etc.

Grove at 31 set forth his views on the correlation of forces, and at 41 was Queen's counsel.

Harvey at 40 made the discovery of the circulation of blood, and made it public at 49.

Jenner at 21 began his investigation into the difference between cow-pox and small-pox. His attention was called to the subject by the remark of a country girl, who said in his hearing that she could not have the small-pox, because she had had the cow-pox. At 47 he had perfected his great discovery.

Morton, Wells and Simpson were all young when they made their experiments and discoveries in anæsthesia.*

Although I have been the first to extensively investigate this subject of the relation of age to achievement, and to establish statistically the time of life at which men do their best work, and to show from this investigation that the prime of life and the golden decade are early and not late, in short to *make the scientific discovery of the law of the Relation of Age to Work*, and to point out its various practical applications, yet the general conclusion in these researches has been more or less anticipated by a number of illustrious thinkers.

Thus Goethe, whose rich and powerful brain saw farther into almost every subject than any of his contemporaries—soaring high on the wings of science and of song—in his matchless conversations over and over again sings the praises of youth. Says he to Eckermann: "Yes, yes, my good friend, we must be young to do great things." And in another place, speaking of government, he said with emphasis: "If

* I have ascertained by these researches that nearly all the greatest geniuses of the world were *precocious* in the line in which they subsequently became famous—some of them extraordinarily so; still further, I have found that those who were very *precocious*, attained as great longevity as those in whom the *precocity* was less marked.

I were a premier I would never place in the highest offices people who have risen gradually by mere birth and seniority, and who, in their old age, move on leisurely in their accustomed tracks ; for in this way but little talent is brought to light. I would have young men."

Luther is reported to have said that : " If a man is not handsome at twenty, strong at thirty, learned at forty, and rich at fifty, he will never be handsome, strong, learned or rich in this world." In the light of these statistics this statement becomes a prophecy with a most remarkable fulfilment. Sterne says that " at sixty years of age the tenement gets fast out of repair, and the lodger, with anxiety, thinks of a discharge." Mr. Emerson, even in his excellent plea for old age, makes this admission : " We do not count our years until there is nothing else to count ; " and of literary inactivity in old age he says, with high wisdom : " We postpone our literary work until we have more experience and skill to write, and we one day discover that our literary talent was a youthful effervescence which we have now lost."

Schiller has expressed the same idea as his friend Goethe in the maxim : " *Denn der Lebende hat Recht,*" " For he who lives is in the right." The French have a motto that must have been originated by some one who thought of these things, " *Qui n'a point de sens a trente ans, n'en aura jamais.*" " He who has no sense at thirty years of age will never have any."

Very recently Dr. Oliver Wendell Holmes, in an address at the commencement of Bellevue Hospital Medical College, used this language : " New ideas build their nests in young brains ; revolutions are not made by men in spectacles, as I have heard it remarked ; and the whisperings of new truths are not caught by those who begin to feel the need of an ear trumpet."

The late General Halleck, in his book on " Military Science and Art," has a very interesting chapter on the age of the generals of the world ; in that he shows, by a powerful array of statistics, that, with a few exceptions, nearly all the suc-

cessful campaigns of history have been fought by young men. The history of the campaigns of Napoleon illustrates this point most remarkably ; his early successes were gained over old and worn out generals, on whom great hopes had been placed ; but he was finally overthrown by the young and middle aged.

In our recent civil war, the North began with old generals, and failed ignominiously at nearly every point. The average age of the generals and admirals (including Farragut) who put the war through was between 35 and 39.

One of the most striking passages on this subject is the following from Montaigne's Essay on Age :

"For my part, I believe our souls are adult at twenty as much as they are ever likely to be, and as capable then as ever. A soul that has not by that time given evident earnest of its force and virtue will never after come to proof. Natural parts and excellences produce what they have fine and vigorous within that term or never :

‘ Si l'espine non picque quand nai,
A peur que picque jamais,’

as they say in Dauphiny. Of all the great human actions I ever heard or read of, of what sort soever, I have observed, both in former ages and our own, more performed before thirty than after, and oftentimes in the lives of the same men. May I not confidently instance in those of Hannibal and his great competitor Scipio ? The better half of their lives they lived upon the glory they had acquired in their youth ; great men after, 'tis true, in comparison of others, but by no means in comparison of themselves. As to myself, I am certain that since that age both my understanding and my constitution have rather decayed than improved, retired rather than advanced.* 'Tis possible that with those who make the best use of their knowledge and experience may grow up and increase with their years ; but the vivacity, quickness, steady-

* This confession is all the more remarkable from the fact that the immortal essays of Montaigne were not written until he had passed the golden decade.

ness and other qualities, more our own, of much greater importance and much more essential, languish and decay

'Ubi jam validis quassatum est viribus acvi
Corpus, et obtusis ceciderunt veribus arbus,
Claudicat ingenium. deli at lingua que mensque.'

'When once the body's shaken by time's rage,
The blood and vigor ebbing into age,
No more the mind it's former strength displays,
But every strength and faculty decays.'

OBJECTIONS AND QUALIFYING CONSIDERATIONS.

As briefly as possible I will consider some of the objections to these views that may be made by those whose attention is for the first time brought to this subject.

First.—Why has the idea that the mind declines later than the body, and is most strong and active between forty and and eighty, been so generally and without dispute accepted?

The explanations that I have to offer are these :

1. The faculty of reverence has been made subordinate to the faculty of reason.

The excessive exercise of reverence is a survival of barbarism. It is a habit that has come down to us from dark and ignorant ages, and though very much modified by civilization, especially among the educated and thoughtful, is yet among the masses of society usually dominant, and sometimes dangerous. Reverence, like reason, is organic, and is as essential to a complete character. In the well trained mind it is the servant of reason. It discriminates in the objects of its veneration, and knows at least some of the grounds that call for its exercise ; it honors the aged, not because they were earlier born, but for a lifetime of accumulated character and labor. It venerates antiquity, not because it is antiquity, but because of the really great and good thoughts that it gave to the world. But with untrained minds—and these constitute the majority even in the most advanced civilization that the world has yet seen—reverence is the master and not the servant of reason, and is exercised blindly, disproportionately and ex-

travagantly. Ignorant of the fact that reason, like the muscular and osseous system, undergoes various changes and degeneration in advancing years, they reverence the aged simply because of their age, even when their lives have been passed in ignorance and folly. Forgetting the beautiful thought of Bacon, that the so-called antiquity of the world is really its youth, they reverence the past because it is the past, even when it represents only superstition and crime.

2. Nearly all men of very distinguished reputation are in the decline of life, while reputation beyond the cliques especially interested in our labors, only come long after our labors are completed.

Permanent fame, even in this rapid age, is a plant of slow growth—first, the blade ; then, after a time, the ear ; then, after many years, the full corn in the ear. Single acts, however brilliant and important, rarely insure immortality. The heights of glory are not scaled at a bound, but only by long climbing, and many wearisome and painful steps.

In order that a man may become permanently famous it is necessary, first, that he originate thoughts and acts so superior to the average as to make him worthy of fame—for copyists and imitators never become permanently famous ; secondly, that these thoughts and acts shall be known and appreciated by those few of his peers who are specially interested in them ; and, thirdly, that the reputation that he has acquired among his peers shall have penetrated all the strata of society, from the philosopher to the school boy, and become common property of mankind. Not until one's name has passed the third stage can it be said to be truly illustrious. Even in these days of the telegraph and printing press, this third stage will not easily be reached in less than fifteen or twenty-five years after the acts have been performed that deserve fame.

In past ages the best fame was very largely posthumous, and it is sometimes the case even in the nineteenth century. The greater men are the longer it takes for their influence to pervade the multitude below, just as some of the fixed stars

are so far above their earth that the light, in spite of its velocity, is many years in reaching us, and some, it may be believed, are never seen by mortal eyes until the stars themselves have passed away into eternal night.

The aged men whom we delight to honor, and whom we are proud to know, earned the right to our esteem by hard work in retirement and poverty, and in positions where they would not have been recognized on the street or mentioned in society. It may be said of nearly all famous men, as has been justly said of Humboldt, that he had the greatest reputation when he least deserved it.

And thus it is that all our reverence appears too late. Fame, like money, oftentimes comes when it is least deserved and least needed.

Nearly all the men mentioned in "Men of Our Times" biographies are over fifty years of age, and if the work "Eminent Living Americans" ever gets through the press, it will be found that the same facts will hold good even in this country—the paradise of young men.

Undue reverence for age is entirely consistent with outrageous neglect of and cruelty to the aged; and, conversely, tender care for the old is not inconsistent with great lack of reverence for age as such. Reverence for age has declined with civilization, while almost everywhere kindness toward the aged has increased. At the present time we must go among the savages to find age truly revered and influential; but the barbarian who never enters the presence of his father without bending his knee, will greedily eat that father when he has grown too feeble to resist, or will leave him alone in the forest to die.

As superstitious reverence for age diminishes, intelligent respect for youth increases. Under the Roman law, to be a son was to be a slave; even after adolescence and marriage the hand of the father might at any moment fall on the head of his child. The idea that children have feelings which parents are bound to respect is largely a modern and primarily an American idea, and even here had reached no impor-

tant and general development until within the past quarter of a century. There is no country in the world where age is so little revered and youth so much respected as the United States, and there is no country where both youth and age are treated with greater tenderness, delicacy and consideration.

3. The false teachings of works of art. It is a fact which no one will question, that of the millions of sculptures, busts, portraits, engravings, etc., of individuals and of assemblies, with which civilization abounds, the great majority represent old men. The explanation of this is not obscure. Individuals are most disposed to secure pictures of themselves in old age, as the time draws near when they must leave their friends, and when the battle for bread is over, and they have the leisure and means to devote to the luxuries. Then again, as a result of the indiscriminate deference to age of which I have spoken, men are not asked for their pictures until long after the honor is deserved. As with individuals, so very often with assemblies. The ignorance and superstition of artists—and it may be affirmed that no other intellectual class are so ignorant outside of their department, and so superstitious, since most high art usually require native reverence for the old and the past—have represented nearly all great gatherings of distinguished men as composed of old men. The ancient custom of powdering the hair has done much to increase and perpetuate this error.

Take, for example, any picture of the Continental Congress or the signers of the Declaration of Independence, and we shall find that the individual members nearly all appear to be old and venerable men, and yet we shall see that very many of the members of these bodies were young men between 25 and 35, and the average age of the fifty-six signers of the Declaration was between 40 and 45.

If the picture galleries represented their heroes at the age of their maximum of production, they would be filled with youthful if not boyish faces.

Still again, out of deference to another barbarian folly,

that it takes great brains to rule nations and lead armies, and that the best expression of the human mind divine is found in physically governing or slaughtering men, all our histories, geographies, compends, books for children, and picture galleries, are filled with the faces of military and political heroes, to the exclusion of the truly royal and wise, who, by their thoughts and words, become the silent creators of kings and lead the leaders of armies.

Now, for special reasons which need not be explained in detail, men have not been supposed to be capable of governing others until their own brains have begun to degenerate, and the fires of youth have spent half their force.* The pictures of the statesmen of the world are, therefore, the pictures of the age.

1. It has been stated that, in their opinion of the relation of age to work, men are influenced by their own age; that as we advance in years we place the golden decade further and further forward. The answer to this objection is two-fold. (1.) Except in individual cases, it is not true that old people put the golden period at advanced life. The young reverence the aged more than the aged reverence themselves, and age appreciates youth better than youth appreciates itself. Since I began to write on this subject I have had varied opportunities to compare the opinions of the young and the old in regard to the question when the mental powers are at their maximum, and I have been surprised continually to find that while the young put the golden period late, the old put it in early or middle life. The old frequently tell me that my researches simply confirm their own observations and experience. The young are reverential and look with awe upon their gray-haired seniors; they are hopeful, and aspire to great things in the very distant future. If the golden decade be near, as the law I have announced discloses, then they must gird up their loins in

* Emerson, in his "Essay on Old Age," calls attention to the fact that the words expressing official bodies, as *patres*, *senes*, *senate*, *seigneurs*, and *gerousia*, all, by their derivation, signify old men.

great haste, else they may find themselves beaten in the race of life. I have seen but two young men who at once gave full assent to the law of the relation of age to work as announced in this paper. One of these was R. S. Guernsey, Esq., member of the New York Bar, and a member of this society. He informs me that he has been studying the subject for many years, and that his conclusions accord with mine.* A former instructor of mine—a broad-minded and

* Shortly after this paper was first read I received from Mr. Guernsey the following letter, which, by his permission, I publish :

NEW YORK, March 29th, 1873.

DR. GEORGE M. BEARD.

Dear Sir : I was much pleased with your address on the "Legal Responsibility in Old Age." The subject of the growth, maturity and decline of the mind has occupied my attention and observation for many years. I will mention three points particularly.

1. All the books on miscellaneous subjects bought for use (meaning those not absolutely required in a professional occupation) are purchased by men *under* forty or forty-five years of age, and books bought *before* that age show the principal subjects of a private library, however large it may become afterwards, whether necessary in professional occupations or as a means of enjoyment and daily use.

2. Men *after* fifty years of age rarely ever *study* any new subject, generally relying solely on the stock of knowledge that they have on hand. *Lawyers* and *statesmen* are particularly subject to this rule, and are very conservative, and regard experience and precedents of greater importance the older they get. On this fact mainly depends the permanency of all governments. Political revolutions are supported by persons under forty, and I consider that a great danger to the stability of any government is the extension of the right to vote to all men over twenty-one years of age. The men from twenty-one to thirty-five are more numerous than older men, and the former class are originators and enthusiastic, and fond of novelty, and must necessarily have but little experience, and do not regard it as of much importance. This leads older demagogues to seek popular favor, and thus get into power by favoring new schemes, and then the entire political power of a government can be held and controlled by a few unprincipled persons. * * * *

3. From twenty-five to forty may be regarded as the seed time of life—that is, the time when knowledge (facts) is accumulated and *stored up for future use*. Men mostly mature (use these facts) after forty and up to fifty-five, and if the accumulation is large, up to the time of some disabling disease or death. From fifty to fifty-five may be regarded as the stationary period when life is at its flood.

Yours, etc.,

R. S. GUERNSEY.

liberally cultured man, a well known professor—once remarked to me: "You can hardly expect any one about thirty-eight or forty to accept your theory." The reason for this is that not one in ten thousand ambitious men who have reached their fortieth year have at all fulfilled their ideal; those who have failed hope to succeed, and those who have somewhat succeeded aspire to nobler success in the future. The harvest is past, the summer over, and they are neither as rich or famous as they hoped to become. It is not in ambitious human nature to be content with what we have been enabled to achieve up to the age of forty. Twice I have been told by men of ability, and culture, and achievement: "If your theory is true I ought to commit suicide." My reply in both cases was in substance this: The best of your original, pioneering, radical work is in all probability already accomplished. The chances are tens of thousands to one that you will originate less in the future than you have in the past; for, just as we know by statistics that a man at forty has a

Within the past few months two or three young men of ability and culture have informed me that they have been converted to these views. through a careful study of the evidence, and are trying to shape their own lives accordingly; but the great majority of young men, for the reasons above given, shut their eyes both to the facts and the arguments. On the other hand old men not a few—among whom are some of the ablest and most eminent scientists in the country—have given me by letter or in conversation their assent to all the leading doctrines of this paper. I have observed, however, that the old men accept these views because they were prepared for them by previous thought and experience. In case they previously held different views, they do not change, but as in all matters, adhere to their old belief, without any regard to the facts. The converts to this theory of all the relation of age to work, must, as in the case of all new theories, right or wrong, come mainly from the ranks of the young. As compared with other radical and revolutionary theories, it has, when brought to the attention of the world, one advantage and one disadvantage. It has the advantage of finding a number of men—especially of the thoughtful, scientific and scholarly sort—whose general observation and personal experience in life have fully prepared them to accept it; it has the disadvantage that the young men, among whom the authors of new theories must look usually for their converts, are, for the reasons just given, indisposed to accept or even to investigate it.

If this theory shall follow the general law it will be at least fifteen and probably twenty-five years before it is generally understood.

certain average expectation of life, so do we know that he has a certain average expectation of original work. There is a chance in many, many thousand that you will live to be a hundred years old ; there is about the same chance that you will make some great discovery or invention, or conceive and execute some original production in art or literature. Fame and wealth may come to you far exceeding your wildest dreams ; but they will be the result and the reward of the work you have already done, or are now doing. Happiness may augment with years, because of your better external condition ; and yet the highest happiness is obtained through work itself more than through the reward of work. Earth has no joy like that which comes from the birth of a new thought in a young brain.

It may be said of this theory of the relation of age to work as Darwin says of his theory of development—that it should have nothing to do with our hopes or fears. Here, as everywhere, the question is, not what we want to be true, but what is true. It may be unpleasant to admit that we are near relatives of monkeys, but we know that we must be descended from sources in many respects little superior to monkeys. It may be disheartening to succumb to this theory, and feel that after forty our chances for originating great thoughts or deeds are but one in many thousand ; but we know by observation that when a very old man does any very great thing the world wonders. In the kingdom of science the day for hopes and fears is over ; the day for fact and induction is begun.

3. To the objection that the law I have given is derived from eminent names only and not from the average mind, the reply is very obvious. The ordinary mind originates nothing and cannot be of any service in indicating for us the time when the thoughts of the world were conceived. The average man everywhere is a fool. Over the surface of this world there roam large flocks of sheep, about one billion in number, with here and there a bell-wether to lead them. When Goethe, in his "Faust," says that "this world is one

enormous fool," he is, from the standing point of original thought, guilty of no exaggeration. In the list of names from whence my averages are derived, however, are found some who are far from being the greatest names in history. The aim was to represent all grades of historic fame—the lowest as well as the highest. Some of the names selected are but little known, or their glory shines but in a narrow sphere.

General observation shows that the law thus established for the different orders of genius applies to the common mind everywhere, so far as the common mind is capable of originating, or of doing anything that approaches originality.

Observation among the medium classes will, so far as it can go, confirm the statistics derived from the higher orders. The average mechanic, merchant, artisan and professional man everywhere does the best of his pioneering work, by which he maintains his family and gleans a fortune, before forty. All merchants tell me that if a man does not lay the foundation of his fortune before forty-five he will probably die poor. Routine work and accumulation may come later; but the original work and preparations that try the brain power are done early or never.

4. It may be objected that, as a matter of fact, and far more than would be consistent with the statistics here presented, men of ability in very advanced life, in their writings, speeches and conversation, manifest mental powers of a high order of originality long after the physical strength has severely declined.

In answer to this objection it may be said that thought, like money, is a possession, and accumulates by compound interest. When Emerson indites a rich and suggestive essay, or Beecher preaches an eloquent discourse, they do not, necessarily, originate anything at the time, but simply draw on their abundant stores, gathered during a long and active life. Boys at school talk wildly of extemporaneous speaking; but, in strict language, orators extemporize nothing; excepting occasional flashes of thought that are struck forth by the surcharged brain under great excitement, extempo-

aneous speakers simply repeat automatically what they have learned long before.*

The conversation of old men of ability, before they have passed into the stage of imbecility, is usually richer and more instructive than the conversation of the young; for in conversation we simply distribute the treasures of memory, as a store hoarded during long years of thought and experience. Conservatism is therefore justly regarded as the lightest form of intellectual labor, and grows easier as we grow older, because we have greater resources to draw from. He who thinks as he converses is a poor companion, as he who must earn his money before he spends any, is a poor man. When an aged millionaire makes a liberal donation it costs him nothing; he but gives it out of abundance that has resulted by natural accumulation from the labors of his youth and middle life. When an old man utters great thoughts, it is not age, but youth that speaks through the lips of age; his ideas which, in their inception and birth, drew heavily on the productive powers of the brain, are refined, revolved, and disseminated almost without effort. Old women make the best nurses, and the aged are good educators and guardians, but as a rule, only youth and middle life can beget children. Everywhere it is the first step that costs. Business men have a just maxim that after a man has saved a thousand dollars, the road to wealth is easy. The activity of age is the result of the momentum acquired in youth and early manhood.

CHILDHOOD, YOUTH AND OLD AGE BUT IMITATORS.

The creative period of life, it will be observed, is limited to fifteen years, between twenty-four and forty. A considerable amount of work is done before twenty-four, and a vast amount is done after forty; but at neither period is it usually of the *original* or *creative* sort that best measures the mental

* Henry Ward Beecher, one of the very ablest of off-hand speakers, admits this in his recent lectures on preaching.

forces. The work done before twenty and after forty is usually work of imitation or routine. In early youth we follow others; in old age we follow ourselves. Boys in school and college copy, commit, repeat, and but rarely think. Collegians who, in this country, graduate at the age of twenty-two or twenty-three, rarely give themselves to fresh research, and almost never make any invention or discovery; hence the barrenness of even the best prize essays and orations. Commencement orations are dull because the authors tell us nothing new; even their language is copied, with slight variations, from the authors whom they have most read and studied. Only the most precocious minds create thoughts before twenty. It is believed that from twenty-five to thirty the majority of thinkers begin to develop new thoughts. From forty and upwards they develop perfect and repeat the conceptions of the period between twenty-five and forty; they copy themselves as in early youth they copied others.

THE ART OF WRITING MAY IMPROVE WITH AGE.

No art when once acquired is readily lost, even in advanced life; but on the contrary, most of the arts may be refined and developed in age. Most strikingly is this illustrated in painting and sculpture, in which realms, as we have seen, quite old men have succeeded. Similarly with the art of writing. I refer to the style, the dress, the use of words, the art of expressing thoughts, and not of *thinking*. Men who have done their best thinking before forty have done their best writing after that period. This would appear to have been the experience of Dr. Johnson, Edmund Burke, Rousseau and Voltaire. But the art of writing—the mere style of expressing thought—noble as it is, must and does, in the estimation of men, rank far below the art of thinking. It is thought, and not the language of thought, that best tests the creative faculties. In every form of art—painting, sculpture, architecture—it is the conception that tells, although conception needs execution to make it availa-

ble. It is wise, therefore, for young philosophers to do their thinking while young and in middle life, and to delay the permanent and final publication of their thoughts until they have also perfected the inferior but not unimportant art of expression.

5. It may be claimed that the statistics I have gathered are insufficient, and that a wider induction is necessary to establish a law of the relation of age to work.

While I do not claim that my researches have exhausted every name of history, I do claim that they are thoroughly representative, embracing every branch and phase of original work from the earliest records until the present time. It would be difficult to find any great and widely known character in any age or country whose life is sufficiently known to be of value in an investigation of this kind, that is omitted from my list. The life of a thoroughly obscure person, or one known only in a very limited circle, does not serve us as a means of illustration or argument in an investigation of this character. To the illustrious names of history I have added a number of distinguished living representatives. When the list is published, under its appropriate classification, it will be found to be as exhaustive as could be well desired. The dates on which I base my average, representing the thoughts and deeds of nearly one thousand of the best names of history, point to nearly every great or leading fact of civilization; they are landmarks of the progress of the human race from barbarism to civilization. If the thoughts and deeds represented by these statistics had never been, civilization would never have been. An induction so wide as to include the great and radical thoughts and acts by which man has been raised from the condition of savagery, and the time of life at which they were conceived and executed, is surely a sufficient basis from which to determine the law of the relation of age to work.

Again, it is true here, as in other and allied investigations, that, beyond a certain point, statistics are of no value, except to confirm and illustrate. The general law of the rela-

tion of age to work may be made out from an analysis of the lives of two or three hundred names, taken at random but carefully studied by the principles I have indicated. Any one who will diligently study the lives of even one hundred of the great names of history, will arrive at results which will substantially confirm all that I have here claimed.

The same principle is seen in getting statistics of longevity of different occupations. The average length of life of any great class—say clergymen—is demonstrated by a truthful analysis of a few thousand cases. It has, indeed, been shown by Rev. Mr. Sherwood, of the Society for Promoting Life Insurance among Clergymen, that the result of ten thousand observations differ little, if at all, from the result of five thousand. I am continually enlarging the area of facts in the study of this subject of the law of the relation of age to work, but the added statistics do not materially alter in either direction the mean year of greatest productiveness, or the relative position of the decades as obtained from the study of the first two hundred and fifty or five hundred lives.

The lives of some individuals are typical illustrations of the law. I may mention as especially worthy of study in this regard the lives of Goethe, Humboldt, Wordsworth, Carlyle, Newton, and Liebig. A minute study of the intellectual history of these six men will illustrate the law of the relation of age to work, and many of the special applications referred to in this paper, to a degree that will surprise those who have not before thought on this theme.*

There remains the two-fold consideration that young men have greater stimulus to exertion than old men, and that the old control nearly all the wealth and prestige of the world. And yet nine out of ten among the aged are poor and obscure, and all their lives have had all the stimulus that poverty and obscurity can give to perform original work, but these stimuli seem to be of service only to the young. The aged are oftentimes crushed by misfortunes that only stimu-

* The name of John Stuart Mill may be added to this list.

late youth to original and successful effort. The opportunities for original work among the aged afforded by their wealth and by the material assistance and co-operation and attention that are ensured them by their reputations and by the positions which they hold as professors, teachers or public officials are, as we have seen, but rarely improved, while the young make their discoveries amid poverty, neglect and insult, and without any of the encouragements of past successes to animate and inspire them.*

These researches have more than a scientific, they have a *practical* interest. They have important relations to psychology, to neurology, to biology, to medical, medico-legal and hygienic science, to history and government in all its departments, and to the every-day life of every man. All of these relations I shall in due time consider in full detail.

On the basis of the above law of the relation of life to work we are prepared to intelligently discuss the second division of our theme.

To what extent is the average responsibility of men impaired by the change that mental faculties undergo in old age?

It is impossible, in the state of science that now obtains, to fix any mathematical limits for human responsibility. Responsibility is itself a vague term, and our means for determining the degree of it in any individual are more indefinite than the term itself. This fact so often brought up as a reproach to pathology, is rather an evidence that pathology belongs to the higher strata of science. It is only mean and material truths that are exact. All the nobler sciences—politics, morals, psychology—are unmathematical and ill-defined. The largest and most interesting

* Mr. Proctor, in the able essay referred to, while quoting with substantial approval these conclusions of mine, presents this qualifying consideration. "But it must not be overlooked that it is precisely because of the original work done in earlier life that a man, as he grows older, is commonly prevented from accomplishing any great amount of original work. Nearly the whole of his time is necessarily occupied in maturing the work originated earlier." The reply to this consideration is suggested in the remarks made above.

departments of literature, poetry, oratory, romance and philosophy are bound by no arithmetical law—everywhere the sweetest and purest pleasures are the least precise.

The question of legal responsibility in old age comes up in the following cases :

1. Cases of crime committed by the aged.
2. Cases of wills that are disputed on the ground of senile incapacity.
3. When it is desired to fix the limit when important officials, as Judges and others, should be retired, and the age beyond which men should not be eligible to office.

4. Cases of contested priority in invention and discovery.

Cases of grave crime committed by the very aged are comparatively rare ; for the crimes of the world that require physical, intellectual and moral courage, and skill, and persistence, are committed mostly by boys and very young men. The researches that I have made on this subject have shown that the golden decade of crime is between twenty and thirty. If some judicious, discriminating earthquake could swallow up all of our criminal classes between fifteen and forty we might leave our doors unlocked at night and reduce our police force to a minimum. The reason why crimes are so largely monopolized by the young are manifold, and need not be here discussed.

Corruption in political and business life, and breaches of trust, are very common among the old, as every morning newspaper bears witness ; but as these offences are not usually punished, and some of them are not even punishable by human law, it is perhaps neither polite nor proper to consider them as crimes. Offences that depend on the sexual passion are not infrequent among the aged ; for it is a fact of interest that in the decline of life we sometimes return to the vices of youth. I recall without difficulty the names of several prominent clergymen who have been charged with sexual irregularities, and all of these were old men. Cases of wills contested on the ground of senile incapacity are sufficiently frequent, and are sometimes very complicated and an-

noying. The significance of the law of the relation of age to work, in its bearing on legal responsibility in cases of crime or contested wills is, that it demonstrates the *presumption* of more or less intellectual or moral decline in old age. This presumption must be considered certainly in all cases of extreme age, and it should be allowed due weight. Three facts must, however, be also considered :

1. That there are not a few who are exceptions to the law of the decline of the intellectual and moral nature, just as there are exceptions to the universally accepted law of the decline of the physical nature. There are men who in extreme age preserve their teeth sound, their hair unchanged, their complexion fresh, their appetite sharp and digestion strong and sure, and their repose sweet and refreshing, and who can walk and work to a degree that makes their children and grandchildren feel very humble; but these observed exceptions in no way invalidate the general law, which no one will dispute, that the physical powers reach their maximum between thirty and forty, and that the average man at seventy is less muscular and less capable of endurance than the average man at forty.

Just so there are men who, in extreme age, preserve their reason clear, their imagination rich and strong, their memory faithful, their conscience sensitive, their moral courage heroic, and their temper sweet and pure. There are those who sail into the harbor of old age freighted with treasures of virtue gathered during the long and perilous voyage of life. There are those whose boughs in the autumn of life hang heavy with all the fruits of the spirit, beneath which the world may find refreshment and shade. But these exceptions in no way invalidate the general law that men decline mentally, as they decline physically, in advanced life.

2. That very great mental decline and grave cerebral disease are yet consistent with average responsibility.

The brain may be saturated with disease, and yet the mind be clear enough to make its possessor responsible in some, if not in all directions. Men differ in their organic responsi-

bility; even in the golden decade one healthy man may be far more responsible than another healthy man of the same age. Men must be compared with themselves at different periods of their lives, and also with others—with the average standard that exists among men, indefinite as it may be—in order to fix the degree of their responsibility.

It is right and proper to examine the larynx with the laryngoscope, the ear with the otoscope, the eye with the ophthalmoscope, and to test the electro-muscular contractility by electricity, the nervous sensibility by the electric brush, and the muscular strength by the dynamometer; but after we have exhausted all our methods of physical examination, and perchance have made clear our diagnosis of senile disease of the brain—sclerosis of some sort, it may be, or hemorrhage, or congestion, or anemia merely—we have done a little, and but a little, towards answering this question, whether *the man is or is not responsible for all his actions*. Disease of the brain, of some form or other, is an everyday matter in both sexes and at all ages. Probably very few persons go through life carrying a nervous system at all times healthy. If a hundred octogenarians were taken at random, it may be doubtful whether one of the hundred would have a brain absolutely physiological. Disease of the brain is one thing; disease of the brain that seriously impairs responsibility is another and a very different thing.

My definition of insanity has been anticipated in the foregoing remarks: *It is a disease of the brain, unaccompanied by loss of consciousness, but of such a character as to seriously impair responsibility.*

3. That a man in the decline of old age may be irresponsible in one or two directions, while perfectly responsible in others.

Only in a minority of cases does a man go down at once, along the whole line of his being. The faculties frequently retreat as armies do, here and there, by regiments, or bands or companies—some standing their ground while others fall back—and not by a sudden and instantaneous rout of every

individual. Thus a wearing out old man may be quite responsible in every direction except where money is concerned ; for it is a very humbling fact that the love of money is strongest when there is least need of it. The youth cares little for money, but much for what it will bring ; the old man cares little for what money will bring, but much for money. Just as our voyage is completed and we are entering the harbor we seek to lay in provisions as though the ocean, and not the shore, were before us.

Personal spite against individuals, relatives and others, may, and often does in old age, amount to a disease. A man may converse perfectly well, may write eloquently, may be a kind neighbor and friend, and yet may exhibit constantly a pique against some relative, out of which he cannot be reasoned, and on which he talks and acts after the manner of a madman. In cases of contested wills this possibility may be considered.

In those somewhat rare cases where corruptionists, bribers, and those who are guilty of a breach of trust, are brought to trial, the query may sometimes arise, how far the decline of the intellectual and moral faculties may account for their behavior, and how far such decline may modify their responsibility. One point that the Credit Mobilier investigation brought out with great clearness was, that men who are naturally upright and true may, in the decline of life, lose both their intellectual and moral sharpness to such a degree that they fall into errors, which younger, shrewder and more unscrupulous men would have avoided. The men whose characters suffered most by the investigation were comparatively old men, and two of them — Ames and Brooks — have since died, and of chronic diseases.

The very aged are liable to be deceived, and to have traps sprung on them by their unscrupulous subordinates or associates ; for, as I have said, experience is a schoolmaster that can teach us only up to a point. Experience in business life teaches sharpness, shrewdness and caution, but the

young lad just entering life is not half so easily deceived, defrauded and ruined as very old, wearing-out men who have spent long lives in the battles of business.

Each case must be studied by itself in the light of the law I have adduced, and the several principles that I have indicated. The methods by which these principles are to guide us I can best illustrate by citing two or three cases.

The case of Horace Greeley capitally illustrates my theme. There are evidences, varied and sufficient, that for several years before his death his brain was not in a physiological condition. In the last week of his life he became insane, and, as is so often the case in old men, he became, in matters where money is concerned, irresponsible. He, who all his life had cared nothing for money, in his old age, when disease had invaded his brain, cared for little else; and all this time, or most of it, he was capable of conversing intelligently, and of writing very good editorials. Making a will was precisely the work for which he was incapacitated. His second will was, therefore, disallowed. When he made his first will his brain was not equal to its best—was probably much below its maximum; but there were no evidences at that time of serious declination from the standard of average responsibility.

When an old man who has in his lifetime been benevolent and wealthy, becomes fearful of the poor-house, and begrudges the meat on his table and the clothes on his back, we have reason to suspect serious cerebral disorder that may incapacitate him from making a will. A case of this kind has recently been brought to my attention.

I once had under my observation an aged clergyman, who all his life had been almost fabulously mean and penurious, who let no opportunity slip in any direction of exacting the pound of flesh. In his prime—in the golden and silver decades—he had been a preacher of great eloquence, and had exhibited high enthusiasm and true courage as a reformer. Between 70 and 80 he waxed worse and worse; he became a nuisance; lost his memory; lost his wife, and married again

under the most absurd circumstances; was divorced, and again married under circumstances still more absurd; displayed a morbid sexual appetite, and went to gross excesses; lost his physical health, which had been provokingly good; lost his piety, which had never wavered for a moment during all his iniquities; and finally, to the infinite joy of all, lost his money through the treachery of his last wife, who, seeing that he had lost his shrewdness, befooled and deserted him.

This complicated case illustrates both the importance and the difficulties of my theme. Here is a strong, able, and, in some few respects, good man, originally avaricious and mean, gradually failing in old age, and going down and down, until he has become an imbecile. Responsibility has passed into irresponsibility. Clearly responsible ten years ago, clearly irresponsible now, where was the dividing line? Pathology, it has been said, is the shady side of physiology, and the line where one passes into the other can never be precisely drawn. When a man has passed into drivelling idiocy or helpless imbecility Macaulay's school boy can make the diagnosis; but to tell just where idiocy or imbecility began may defy the ablest physiologist or pathologist. Of the midnight hour the child is conscious, and even the birds can divine that the darkness is deepening on the world; but what physicist so keen as to tell the precise moment when the afternoon begins to pale into the early twilight?"

During all these years this clergyman has been making will after will. Which one is worth anything in the eye of reason or law? Three years ago I advised his friends that he was in many respects irresponsible. They treated him accordingly. He died an admitted imbecile.

A few years since I was attending professionally an old man who was suffering from an attack of hemiplegia of quite a severe character. A few months before his death he made a will, and I was one of the witnesses. The will was contested by some of the children on the ground of irresponsibility. I testified in regard to the case before the Surrogate, giving it as my opinion that the testator, at the time of

making the will, was of sound and disposing mind. His emotional nature was greatly disturbed, as is usually the case when there are clots in the brain, and in many respects his behavior was childish, but in all business matters his mind was abundantly clear, and his conversation on all topics was coherent and intelligent. The attempt of the contestants utterly failed.

A striking example of the recuperative power of nature even in advanced age came under my observation during the past year. A medical gentleman, over seventy years of age, was so injured while attempting to get on board of a horse car that he was attacked by symptoms of the disease known as chronic myelitis or posterior sclerosis, or locomotor ataxia. To the usual symptoms of this disease were added attacks of temporary aphasia with great emotional disturbances that made him unfit for the active duties of his profession. When the case came to trial for damages against the railroad company I testified, as an expert in nervous diseases, that his prospects for recovery were absolutely worthless, basing my opinion partly on the grave nature of the disease and partly on his advanced age. The same testimony was given by another expert in mental disease, and also by a surgeon of large experience. The old gentleman was so nervous and debilitated that the strain of the trial told heavily upon him; even while giving his testimony his appearance, owing to his loss of memory and to his emotional disturbances, created great pity. Under various treatment, however, he improved to a degree that has no parallel in my experience, and at the present time he is able to attend somewhat to business. There are yet sufficient evidences of spinal disease, but all the symptoms have wonderfully improved, and the mind is entirely restored.

Here is a case that seems to defy all law; an old man in the last decennium recuperates under one of the gravest diseases known to science and complicated by mental disorder, with a rapidity and positiveness that is rarely seen in the young. The treatment he received was nothing peculiar—

electricity, both currents—ergot and nitrate of silver; but out of more than a hundred cases of the disease, I have never seen symptoms so grave improve so rapidly. I account for the improvement in this case partly by the recentness of the symptoms—they were only a few months standing—and partly by the fact of its traumatic origin—nervous diseases caused by concussion generally offering a better prognosis than the same diseases caused otherwise—and partly by the excellent constitution of the patient. The case certainly teaches us the fact of the possibility of rapid recovery from severe mental as well as physical disease even at an age when most of us expect to die. Admitting that this patient was at one time irresponsible, in some directions he is fully responsible now, and the fact of his former state ought not to weigh very heavily against the validity of any will he should now make or any act that he may commit, unless there should be unmistakable evidence of a relapse.

I may remark here that the faculty for business sometimes lingers in the brain long after the other faculties have fled forever. An old man may know well enough how to look out for his money when on almost any other important subject he is perfectly childish.

Of the third class of cases—where the time at which Judges and other officials should be retired, and the age beyond which men should not be eligible to office, I can here remark only briefly. It is quite clear, in view of the researches I have made, that it is almost necessary to fix some definite age when Judges should retire, beyond which they cannot serve, as some definite age before which they cannot enter upon their duties. The aim should be to give to the State the best of its manhood—to save it from the inflictions of callow youth and decaying age. True enough, Judges require experience more than enthusiasm, and on the bench mature, well-furnished, more than brilliant minds are needed; but in extreme age Judges may lose their intellectual keenness, and, withal, may acquire a loginess and love for routine that impede justice. I have been told that the

decisions of very old Judges have been more frequently overruled than the decisions of younger men. Any limitation of age must now and then deprive the State of the services of some exceptions to the law—on the one hand, of young men who are wiser before twenty-five than are the average after that age, and, on the other hand, of old men who project into advanced life the enthusiasm and fervor of youth. But the State must not deal with exceptions, but with laws, and aim for the best average results. This State has fixed seventy as the time at which Judges must retire. A similar provision should be made for the Chief Justice of the United States and his associates, and a liberal salary should be assured them on retirement. We do not want too old more than too young men in the Presidential chair, or even in Congress. It is very true that the ordinary duties of the President make little demand on the highest order of brain power, but cases are liable to arise that may make it necessary even for a President to have a first-class intellect.

Of the fourth class of cases, where the priority of inventions or discoveries is contested, I have only time to remark that, when any man over sixty years of age claims to have made any great discovery, all the presumption is against him for in the whole recorded history of the human race I can find no evidence that any great and radical discovery or invention has been conceived and perfected after the sixtieth year. In one case to which a friend has called my attention, this consideration was forcibly urged by an advocate on an important trial.

We now come to the third division of the subject: How shall the effects of old age on the mental faculties be best considered in our Courts of Justice?

The remarks that I am to make on this head will apply to the medico-legal treatment of insanity of every form, as well as to those forms that are most peculiar to advanced life.

The present system of hiring persons, who are supposed to be experts, on both sides, and asking them to testify before a jury of twelve men, who are expected to agree in their

verdict, is, in its adaption to the present age, the most unsatisfactory that human ignorance in its worst estate could ever have desired.

Let us look forward, say one thousand years, to the year 2873, and imagine a professor of medical jurisprudence in this city presenting to his students the history of criminal trials in New York, in 1873. His lecture would read somewhat in this way :

“I can best convey to your minds the method through which criminal trials when the plea of insanity was adduced, were conducted in those distant days, if I take the following from a newspaper report of the time. We can suppose it to be accurate, for it was subsequently published in a pamphlet containing the proceedings of the trial. A physician who was supposed to have seen cases of insanity, being called by the counsel for the prisoner, was thus interrogated. I do not give the answers to the questions, for the reason that they bear no special relation to the question, and give little light on the subject :

“You are a great man on the subject of insanity, are you not?

“What standard works have you written?

“What public positions do you hold?

“What is insanity?

“You have seen this man two or three times—you think he is insane, do you not?”

The style of cross-examination was somewhat different, and the manner in which the lawyer treated the witness was somewhat less respectful than has been the custom in our Courts during the past five hundred years :

“Well, young man, where were you born?

“Was your mother legitimate?

“Is the story true that you ran away with somebody’s wife?

“Well, now, what is the difference between a crazy man and an insane man?

“Are you crazy or insane?”

"Then follows a strange discussion between the lawyer, the witness and the judge, on a vast variety of scientific and unscientific themes, which relate to everything except the responsibility of the criminal. The next day we find that the prosecution, by scouring the city, have found a physician who is an old rival of the first expert, since for thirty years or more they have been accustomed to steal patients from each other, and by the promise of a small sum, not stated in the report, they had secured his services to testify on the other side.

"The jury disagreed—two being in favor of acquittal, two of conviction, and the remaining eight, after changing their vote several times, took an oath on their own account that they would never divulge what their latest verdict was."

Now, gentlemen, there is in this imaginary history more of truth than of burlesque.

The modifications of our system of criminal trials I would suggest are these :

1. Let a commission of say three or five psychological experts be appointed by the Governor. Let them be men who have given special attention to cerebro-pathology; and who have had practical experience in the study and treatment of diseases of the nervous system. Let them be not so young as not to have had experience, nor so old as to have outgrown the value of that experience. Let them be salaried liberally, and be in no way dependent on either side of the cases that come into Court. Let them examine into any case where a criminal or a testator is suspected of irresponsibility, and let them have ample time and means for making the investigation. Let them give the result of their studies of each case in the form of a majority and minority report, if necessary. If subjected to a cross-examination, let it not be until they have first presented a calm, cool written statement of the scientific bearings of the case. The objection that Governors would not make good appointments is, of course, worthy of consideration. No system can be perfect; but it

is a matter of experience that judicial appointments made by Governors have, on the whole, given satisfaction.

2. Let the juries be reduced in number, and let a majority verdict be sufficient. The one great reason why juries in complicated cases so often disagree is, I think, to be found in the evolution of modern society, and in the wide diffusion of intelligence, by which every man thinks differently on every subject from every other man. When the system of jury trial was inaugurated ideas had not differentiated as they have since; for the habit of thinking for one's self, now so common to almost all classes, is peculiar to our modern civilization. In old times to see one man was to see all men—at least of the class to which he belonged. When you had learned his views on religion, politics, war or literature, you need go no farther—you had learned the views of the whole country. When twelve men of that stamp are brought on a jury they find it easy to agree, for they are only twelve times one. They had not sufficient intellect to form individual opinions on a criminal case, or any other subject. Now all is changed. Whereas formerly all thought just alike on matters of religion, it is now hard to find two intelligent men whose religious beliefs or unbeliefs are precisely alike, and the Unitarian denomination boasts that no member knows what the other believes. As with religion, so with every other subject—so with opinions on the merits of criminal cases. When juries disagree the press belabor them for their stupidity. Had they all been as stupid as represented they would have agreed, for nothing is so unanimous as ignorance. It is because of the intelligence of some of the number that juries so often disagree. And the evil will augment as the evolution of civilization goes on.

In England the juries, although they do badly enough, yet seem to agree better than in this country. I account for this by the fact there is less average intelligence in England. The juries in their ignorance agree to do precisely the wrong thing. Conversing on this subject with Dr. Maudsley, of London, a few years since, I asked him what they did in

England with insane murderers. "Hang them systematically," was the reply. In this country we go to the other extreme, and either acquit responsible criminals or else disagree on the verdict.

A jury of experts would be very hard to find. Out of the 40,000 physicians in this country, more or less, there are, perhaps, one or two hundred whose opinion in delicate and difficult psychological cases would be of value in a court of justice. If a dozen of these could be gathered at one place it is doubtful whether they would ever agree, except before the plainest evidence. They would be more likely to disagree than an ordinary jury, because they would be more intelligent, more advanced in the study of cerebro-pathology, and would have far more individual ideas on the subject. I am justified in this assertion, from the fact that in quite clear and simple cases of nervous diseases—such, for example, as locomotor ataxia—a dozen experts generally have a dozen opinions. I frequently see cases of not very obscure nervous diseases where the patient has consulted a large number of physicians who have given more or less attention to neurology, and every one has given a diagnosis more or less different.

If these things be done in the green tree, what shall be done in the dry.

To all this should be added the complications that would arise from professional jealousy, which would surely be a serious practical difficulty in the way of securing an agreement from a jury composed solely of experts.

A responsible commission thus appointed, as judges were formerly appointed, by the governor, would, like the judges, be above reproach, and, holding office on good behavior, would ordinarily be as much removed from the temptation to sell themselves to the highest bidder.

Scientific men, hired by the day to appear as experts, frequently appear to great disadvantage—when testifying in the class of cases described in this paper—from simple inexperience. To be a good witness requires genius in that special

direction, and much experience. One may be a great philosopher, orator, poet, statesman or scientist, and be a perfect fool on the witness stand. The abler the man the worse the witness oftentimes, and especially in matters of science. A scholarly, candid, thorough and modest scientist, who had rather be right than be victorious, and worships no divinity but the truth, and would rather die than be the means of injustice, appears at an enormous disadvantage in the presence of an unprincipled advocate, whose aim is to be victorious at the expense of right, who trembles in the presence of truth, and whose only fear is that justice may be done. On the witness stand a fool and a scoundrel may appear far wiser than a learned and honest man. When we add to this inexperience of scientific experts their oftentimes profound ignorance of the subject on which they are experts, and to this add the unscrupulousness of the lawyers and the ignorance of the judges, who admit evidence that ought to be banished to outer darkness, we cease to wonder that lawyers so often say that they would prefer a dice box to a jury.

In conclusion, I may say that I am not unaware that this essay in the facts and views it presents, so to speak, takes up arms against the human race—that it attacks principles which are hoary with years, and treasured as heirlooms in the hearts of men; that it seeks to undermine doctrines that are sweeter than life, dear as heaven, and in defence of which many have joyfully gone down to die. So far as these views are right, so far, of course, the world is wrong. The strength of the law of the relation of age to work consists in this—that the theory followed the facts, and not the facts the theory; the results of the investigation were as surprising to me as they will be to you.

If anything could cause me to doubt the soundness and verity of these views it would be their immediate acceptance; for the laws of the growth of ideas are as inexorable as are the laws of the growth of plants and animals—those which speedily mature speedily die. No man who is at all in a hurry ought ever to do any thinking for himself. Whatever

of truth there may be in this theory of the relation of age to work is in harmony with the scientific spirit of our time, and must gradually take its place among the convictions of men. First of all, psychology will give it attention, then pathology and general medicine, then scientists and scholars in allied departments, and last of all, of course, law, always behind all other sciences, and filling up the rear in the slow march of the race. But whatever be the fate of this special theory, all of us will agree to this—that the relations of cerebro-pathology and criminal justice must be better in the future than they have been in the past. When politics and statesmanship fail us, the law of evolution comes to our rescue; for, from the foundation of the world, it must have been pre-ordained that the conduct of criminal causes where science is involved, should rise with the needs of the ages, and that the science of criminal pathology should be developed side by side with the upheavals of nature, the multiplication of species, and the infinite march of the stars.

When we consider the stupendousness of the incapacity with which criminal trials, in this country especially, are now conducted, we may be tempted to despair; and yet it is, perhaps, not too great things to expect that some of the younger members of this society may live to see the dawning of that nobler day when lawyers and psychological experts, no longer enemies, shall admit their common ignorance and seek to supplement their mutual deficiencies; when the courts of criminal justice shall cease to be arenas in which rival physicians shall fight their personal battles; when something of the force that is now spent in trying the expert shall be spent in trying the prisoner at the bar; when scientific and scholarly witnesses shall receive the same deference that is now accorded to convicted murderers; when there shall be different grades of punishment for different grades of responsibility;* when, on the one hand, men shall no longer be punished for

* This subject of different grades of punishment for different degrees of responsibility has since been discussed by Mr. David Dudley Field, Mr. Simon Stern and others.

hereditary disease, and on the other hand, the commission of a great crime shall not be regarded as a *prima facie* evidence of insanity ; when, in short, scientific medicine shall be married to scientific law, and truth, and order, and justice, and humanity shall be the offspring.

EMOTIONAL INSANITY.*

BY DAVID DUDLEY FIELD.

IS THERE such a thing as emotional insanity? and if there be, does it excuse an act otherwise criminal? These questions depend upon another, more general, that is to say—What is insanity in its relation to crime? Satisfactory answers would be, as we all know, of immense service in the administration of criminal law; and the aim of this paper is to contribute whatever I may be able toward their careful consideration. My point of view is, of course, the legal side of that two-fold science which we call Medico-Legal, or, as I should prefer to express it, “Medical Jurisprudence.” The pathology of insanity is beyond my province.

A crime is an act or omission forbidden by law, to which is annexed, upon conviction, a certain punishment. Our present inquiry relates solely to human law and human punishment. The element of religion or morals does not enter into the question. No reference is had to a violation of the moral or divine law, however great may be the guilt or awful the punishment. For the present hour we are concerned only with a violation of those laws which depend upon human sanction; so that when I speak of the relation of insanity to crime, I mean the relation which it bears to a violation of the law of the land. Punishment is something annexed to crime, as a consequence, painful to the offender; or, in other words, a penalty which he is to suffer for his violation of the law.

What is the theory upon which punishment is inflicted? It is not to avenge. “Vengeance is mine, saith the Lord.”

* Read April 24, 1873.



David Donnelly Fitch

“To me belongeth vengeance and recompense.” The purpose of human punishment is neither revenge nor retribution, but the enforcement of the law. This is effected by annexing a penalty to their violation. The penalty operates not by way of satisfaction, but prevention. The object is to deter. The threat of punishment is addressed to all. An instance of punishment has a two-fold operation—first upon the offender, to deter him from a repetition of the offence, and then upon others like him, to deter them by force of the example. The measure of a just punishment is, therefore, that kind and degree which are necessary to such an end. The rightfulness of punishment depends solely upon its necessity. The test is not the greater or less ill-deserving of the offender, but the safety of society. Laws are made for the protection of rights. If it be necessary to have laws it is necessary to enforce them. *Necessitas quod cogit defendit.* Show me that a certain rule is necessary to the public good, and that a certain punishment is necessary to the enforcement of the rule, and I accept the conclusion as irresistible that this punishment may be rightfully inflicted. The authority to take human life can only be justified by such a course of reasoning. The argument embraces not only penal laws, but all human conduct. If four men are at sea in an open boat, three of them struggling to reach the land, and the fourth, maddened by distress, insists upon upsetting the boat, the three may rightfully throw him into the sea. When Sir John Franklin, on his perilous journey in the frozen zone, shot one of his men who showed signs of mutiny dangerous to the rest, he exercised an inherent right to protect the company which he was endeavoring to lead to a place of safety. Every age of the world has seen monsters, *hostes humani generis*, whom it was justifiable to exterminate. So, in all regular government, the safety of society is the warrant which the Almighty has given for the punishment of those who infringe its laws. The necessity is not only the warrant but the limit of the power—for useless punishment is itself crime.

Starting from this point we enter upon the question of insanity in its relation to criminal responsibility. I say in this relation, because here lies the first distinction which it is necessary to bear in mind. There may be a degree of the disease which requires that the patient should be shut in a lunatic asylum, or which would invalidate his contract or his testament, but which, nevertheless, would not absolve him from the charge of a criminal offence or its consequences. Our statutes may declare, as they do, that "no act done by a person in a state of insanity can be punished as an offence, and no insane person can be tried, sentenced to any punishment, or punished for any crime or offence while he continues in that state." But this is general language, which needs qualification in its application to the facts of particular cases.

It is curious to observe with what different views different persons regard the question of insanity. The lawyers do not agree with the physicians, or among themselves. The physicians do not agree with one another. Scarcely any two writers, or, for that matter, any two judges, agree upon the same definition or test. This strange disagreement it may be worth our while to illustrate by a few examples :

In 1843 the Judges of England answered certain questions propounded to them by the House of Lords, in reference to *McNaughton's case*, to one of which the answer was as follows: "The jury ought to be told in all cases that every man is presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary be proved to their satisfaction, and that, to establish a defence on the ground of insanity, it must be clearly proved that, at the time of committing the act, the party accused was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing, or, if he did not know it, that he did not know he was doing what was wrong." The test thus given is rejected by Bucknill, who, in his essay on "*Unsoundness of Mind in Relation to Criminal Acts*," says: "We must therefore con-

clude that this, the main portion of the Judges' condition of exemption from responsibility and punishment, on the plea of insanity, is erroneous in principal and inapplicable in practice." And Dr. Hammond says: "Neither is the knowledge of right and wrong a test of the mental condition of an individual, except to a very limited extent. The faculty in question is not inherent, but is the result of education."

In this country, nearly twenty years ago, on the trial of Huntington for forgery, an attempt was made to establish the defence of moral insanity, which is but another name for one species of emotional insanity. On this occasion the City Judge of New York, Judge Capron, charged the jury in these words:

"But it is insisted for the prisoner that insanity, either general or partial, may exist, and the subject be totally unable to control his actions, while his intellect, or knowing and reasoning powers suffer no notable lesion. By this theory insanity is regarded as a physical disease, an affection of the brain, by which the freedom of the will is impaired or destroyed, and the subject is thus wholly deprived of the ability to govern his acts. It is claimed that persons thus afflicted may be capable of reasoning or supporting an argument or any subject within their sphere of knowledge. In a more practical sense, it is claimed that a person may steal your property, burn your dwelling, or murder you, and know that the deed is a criminal offence, and that he will be punished if tried and convicted, and may be able to reason on the subject, and yet be guiltless on the ground of insanity! This affliction has received the name of MORAL INSANITY, to distinguish it from intellectual insanity; because the natural feelings, affections, inclinations, temper, or moral dispositions only are perverted, while the mind, the seat of volition and motive, remains unimpaired. I will not assert positively that this theory is unsound. It may be reconcilable with moral responsibility for human conduct, but I am not reluctant to confess *my own mental inability to appreciate harmony* between the two propositions, if it exist. This theory

may afford a more just and humane standard by which to test the presence of insanity in a particular class of cases than the existing rule ; but, until the proper authorities sanction that theory, it cannot be regarded here."

On the trial of Sickles for murder, a year or two later, the Judge of the Criminal Court in Washington gave these instructions to the jury :

"If, from the whole evidence, the jury believe that Sickles committed the act, but at the time of doing so was under the influence of a diseased mind, and was really unconscious that he was committing a crime, he is not in law guilty of murder. If the jury believe that, from any predisposing cause, Sickles' mind was impaired, and, at the time of killing Key, he became or was mentally incapable of governing himself, in reference to Key as the debaucher of his wife, and at the time of committing said act was, by reason of said cause, unconscious that he was committing a crime as to said Key, he is not guilty of any offence whatever."

In Willis' case, decided by our Court of Appeals in 1865, Chief Justice Denio observed : "The Judge might have said that if the prisoner, when he killed the deceased, was in such a state of mind as to know that the deed was unlawful and morally wrong, he was responsible, and that otherwise he was not. This would, perhaps, have been more precise and discriminating."

In Wagner's case, tried in New York the same year, this language was addressed by the Court to the jury : "I have been requested to charge you that if the prisoner committed the act in a moment of frenzy he cannot be convicted of murder in the first degree. I not only charge that proposition, but, if his mind was in that condition, he cannot be convicted of any offence. The true test of responsibility for acts committed is commonly known as the test of right and wrong. If the jury are satisfied that the prisoner knew the difference between right and wrong, in regard to the particular act in question, then the law holds him responsible for

the act. If they are not so satisfied, of course it would be their duty to acquit him absolutely."

In Cole's case, tried in Albany in 1868, Mr. Justice Hogeboom told the jury that, "If reason was in fact dethroned; if Cole was not at the time in the possession of his faculties; if they were suspended and lost in the presence of and under the influence of an overwhelming domestic calamity; if Cole was at the time incapable of distinguishing between right and wrong in regard to this transaction, or of appreciating the moral quality of his act, he could not be held criminally responsible."

In MacFarland's case, tried in 1870, Recorder Hackett, of New York, charged the jury that: "Sanity is the state in which a man knows the act he is committing to be unlawful and morally wrong, and has reason sufficient to apply such knowledge, and to be controlled by it."

On the trial of Montgomery at Rochester, in 1871, Mr. Justice Darwin Smith charged the jury that: "There is now no room for doubt as to the rule of law in this State. 'A man must have sufficient knowledge, reason, capacity, judgment and mental power to understand not merely that his act is a violation of law, but that it is intrinsically wrong.' Every human being endowed with reason knows that to take the life of a human being is against the law of nature and of God. It is not sufficient that he knows the thing is an offence against human laws, but he must have reason and capacity sufficient to know that he is not only violating the laws of man, but the laws of God and nature."

On Scannell's trial, a month ago, Mr. Justice Brady charged the jury as follows:

"Insanity, considered in its legal aspect, may be stated thus: It means such a defect of reason as would render the prisoner unconscious of the nature and character and consequences of his act, and of its unlawfulness and immorality. A man is, by the law of this State, responsible for his acts when he knows what he is doing, is capable of distinguishing right from wrong, understands the consequences of his act, and

that it is in violation of the laws of God and man. In other words, if the prisoner was in such a state of mind as to know that the deed was unlawful and morally wrong, he is responsible; otherwise not. If he was incapable of distinguishing between right and wrong, did not know that the act he was committing was unlawful and morally wrong, you cannot convict him of murder."

Balfour Browne, in his late work on the medical jurisprudence of insanity, gives the following as his conclusions: "We are now in a position to consider the capacity to commit crime. The statement of the proposition that the criminal law looks mainly to the intention which actuated the accused, has been said to imply the presumption that the individual whom it is sought to bring within the operation of the law has mental capacity, is a free agent, and possesses the power of electing to abstain from what is forbidden, rather than suffer the consequences of offending; and the criminal law of England, therefore, declines to punish where the actor, from want of understanding or mental disease, is not in a position to choose freely; and it might properly be added where, through such enfeeblement or derangement, motives have lost their power of making a man choose the good rather than the bad, and the pleasant rather than the disagreeable.

"It is the same principle that induces the law to exempt very young children from the criminal responsibility of their acts; and the same principle is to be found as the reason for the non-infliction of legal penalties where the individual is, against his will, compelled to do a wrongful act, inasmuch as the dread of distantly future penalties cannot, in reason, be expected to prevail against the fear of present suffering.

"Were it more generally understood—were it more thoroughly appreciated—that it is really the same fundamental principle which induces the law to forego its penalties, even after proof of the criminal act done, in these two classes of cases, less difficulty would undoubtedly arise in practice as to what amount and what kind of insanity is suf-

ficient to establish a claim to immunity from punishment. Were it once held that the proof of that amount of insanity would relieve from the consequences of a criminal act which deprives the individual, either by amentia, dementia or mania, of that amount of free will or choice, of that power to balance and appreciate motives which is found in the ordinary ranks of mankind—were it held that the amount of insanity which deprives a man of this, as the amount of duress which deprives a sane man of the same power, would relieve an individual of criminal responsibility, no doubt could, it seems, in any case, arise.” * * *

And again : “ A German jurist (Mittermaier), appreciating the weight of the medical testimony in criminal cases, has maintained that two conditions are required to constitute that freedom of will which is essential to responsibility, viz., a knowledge of good and evil, and the facility of choosing between them.

“ This definition is, perhaps, more nearly correct than most that have been given ; but it seems to us, looked at in reference to the most recent philosophical researches, and also in relation to the duty of the law to protect the sane from injury, as well as to protect the insane from unnecessary, useless punishment, that the best definition that can be given of legal responsibility is a knowledge that certain acts are permitted by law, and that certain acts are contrary to law, and combined with this knowledge the power to appreciate and be moved by the ordinary motives which influence the actions of mankind.”

The various definitions of insanity, or of that degree of it which exempts from criminal responsibility, contained in the extracts that I have here given, not only differ among themselves, but fail, as I think, to furnish a true and plain rule for judicial investigation—such a rule as would be scientifically exact, and, at the same time, easily understood by juries.

It may be rash for me to try where so many have failed ; but unless there be trial there cannot be accomplishment,

and it is the privilege of all to endeavor, though only one may succeed. Let me, then, offer my contribution to the work of this society, by helping, even though it may be in a small degree, to answer a most important and interesting question.

It appears to me that the true answer is to be evolved out of the theory which I have given of crime and punishment. The ideas of crime and punishment are correlative. That only is crime to which punishment is annexed as a consequence, and everything to which punishment is annexed is criminal. Crime being, as we have seen, an act or omission forbidden by law, to which punishment is annexed, and the object of punishment being to deter, it would seem to follow that punishment is to be inflicted only when it will be likely to deter. But the rules of law are general, and must provide for punishment upon general considerations. They should annex a penalty to an injurious act whenever, according to the general experience and judgment of mankind, the penalty will deter the actor from the repetition of the act, and others like him from imitating it. If it will probably have that effect, society may inflict the punishment; if not, not. The question, then, of insanity, in relation to criminal responsibility, is not merely whether the offender is of unsound mind, but whether his unsoundness is of that kind and degree that he would not, according to the general experience and judgment of men, be deterred by punishment from a repetition of the act, if committed by himself, or of committing it, if seen by him to be followed by punishment when committed by others. And all this depends upon the question whether the offender was or was not a free agent; that is to say, whether he acted from compulsion so strong that the fear of punishment could not overcome or withstand it. There must have been freedom of choice between doing and not doing, and capacity to choose. Since the object of punishment is, as I have said, to deter an offender and others like him, and since one can be deterred so far, and so far only, as his act is voluntary, the question of legal responsibility

must come to this: Was the person accused capable of knowing that the act or omission was a violation of law, and of refraining from it? Was he *capable of knowing and refraining*? I do not ask whether he *did know*, but whether he was *capable of knowing*. If he was *capable of knowing* and of *refraining*, then he was, in the sense of the law, a free agent. The points to be submitted to a jury are these: Was he *capable* of knowing that what he was about to do was a violation of law, and, being thus capable, *could* he have refrained from doing it, or, to use a common phrase, "could he help it;" and I venture to say that upon these two ultimate questions hangs the decision of the issue of insanity in criminal cases.

The questions assume, of course, that the offender is of the age of discretion, and being thus advanced in years is now below it in mind. Children under seven years of age and idiots are not within the scope of criminal law, though they can be operated upon by motives and restrained by punishment. Two boys, five and six years old, playing together, we will suppose, have been taught that one must not strike the other, or, if he does, that he will be punished for it, and, ordinarily, this knowledge will control him; but if one should happen to strike a blow, causing death, no one would think of hanging or imprisoning him for it. Why? Because the fear of such a punishment would have no greater effect in deterring the child than the slight discipline of the nursery. It is not that he does not know the act to be wrong, or that the fear of punishment would not, in most instances, deter him from striking his companion, but because his reason is too feeble, and his will is so little under subjection to his reason that a sudden impulse overcomes him. You may even suppose that he intended to kill, not from malevolence, but from curiosity or an imagination excited by stories of killing, but he has no idea of death as a consequence of the blow: and if he had, as a small object present is stronger with him than a great one future, so an impulse of the moment upon his feeble mind overcomes any

idea of consequences at a distance. The same reasoning which would exclude a child from the scope of criminal law would exclude also an idiot or an imbecile. There must be a capacity to reason, and a power of reason over the will sufficient to deter.

Excluding, then, children under the age of discretion, idiots and imbeciles, as not within the range of our immediate inquiry, I recur to the question of insanity in reference to other persons; and taking the rule of criminal responsibility as I have stated it, let us apply it to the different stages of mental disease. In doing so we should bear in mind that whatever be the true rule, it is, in the present state of the law, applicable to every kind of crime and punishment, whether the crime be in act or omission, or the punishment be death, imprisonment or fine.

And here let me observe that I think much of the difficulty, in regard to the defence of insanity, has arisen from the desire to avoid the extreme punishment of death. Juries shrink from taking the life of one who may, by possibility, be guiltless of intentional wrong, and catch at any plausible excuse for treating the case as one of insanity. We should, however, not be influenced by such considerations, and must treat the question as independent of particular punishments. If insanity is a defence when the charge is murder, it is also a defence when the charge is harboring a fugitive slave or smuggling goods over the frontier.

Insanity, in its general pathological sense, is thus defined by Dr. Hammond, than whom there is no higher authority: "As no two brains are precisely alike, so no two persons are precisely alike in their mental processes. So long, however, as the deviations are not directly at variance with the average human mind, the individual is sane; if they are at variance, he is insane." The medical profession thus pronounces that person insane whose mental processes are directly at variance with those of the average human mind. Now, whatever may be the real essence of the mind, we know it only by its phenomena, and these manifest themselves in four

different forms, namely, in the perceptive faculties, the reasoning faculties, the emotional faculties and the executive faculties; or, in other words, as affecting the perceptions, the reason, the emotions and the will. Under the head of emotions I place the passions, the appetites and the affections. I do not forget that the present most generally accepted division of the mental faculties is into intellect, sensibility and will—the intellect including both the perceptive and the reasoning faculties; but the division I have here given is sufficiently accurate and more convenient for my present purpose. And taking the definition of insanity shown us by the medical profession in reference to the mental faculties as thus divided, we say, that person is insane whose mental processes are directly at variance with those of the average human mind, in respect either to his perceptions, his reason, his emotions or his will; that is to say, there may be perceptual insanity, intellectual insanity, emotional insanity and volitional insanity. I have not time to give instances as illustrations of these different kinds of insanity. It is enough to say that, in perceptual insanity, those parts of the brain only are disordered which are concerned in the formation of perceptions, and the results are the formation of false perceptions, which are designated as illusions or hallucinations, as they proceed from without or from within. In intellectual insanity the essential feature is delusion or false belief, in respect to material objects; in emotional insanity those parts of the brain only are disordered which are concerned in the production of emotions, and in volitional insanity the will has passed beyond the control of the reason.

This is the medical side of insanity. Now, let us look at the legal side. Here the question is, not whether there is insanity in the medical sense, but whether there is that kind and degree of it which, as a general thing, would make punishment useless, considered as a motive to deter. Have we not the key to the answer in what has been already said? The will is the executive department of the mind. Whenever a crime is committed, or the temptation to commit it is

resisted, the commission and resistance are acts of the will ; and whenever the will acts in resistance of temptation it acts in obedience to the reason ; the temptation generally comes from the perceptions or the emotions ; the resistance from the reason and the will. It is the will which executes and the reason which guides. Choice is an act of reason ; execution is an act of the will. Whenever, in respect to a particular transaction, the subject of a criminal investigation, we find reason left sufficient to retain the power of choice, and control of the reason over the will sufficient to make it obey, then the person charged is, in the eye of the law, responsible for his acts and amenable to punishment.

Such is the rule which appears to me philosophical and easily intelligible. It should seem thence to follow that though there be such a kind of insanity as perceptual, and also such a kind as emotional, yet that neither of them taken by itself, nor both together, can justly exculpate the offender or relieve him from punishment. For example, if a person suffering under perceptual insanity thinks he sees an angel, and hears a voice, as of the voice of God, commanding him to kill his child, and acts in obedience to the supposed command, I insist that, nevertheless, he should be punished for it. So, if a person suffering under emotional insanity, caused by brooding thoughts of intolerable wrong, real or fancied, shoots his enemy in the street, I would deal with him in the same way ; and so I would deal with one who, under a morbid, or, as it is sometimes called, irresistible impulse, pushes another over the side of a ship or over a precipice. Such impulses should not be accounted uncontrollable. I commend the answer of that sturdy English judge who, when told that the defendant had committed homicide under an irresistible impulse, replied that the law of England had also an irresistible impulse to punish him for it. Many persons have a morbid impulse to leap from a high rock, but they can restrain themselves. There are thousands who cannot lean out of a window without feeling an impulse to throw themselves to the ground. The drunkard has a mor-

bid impulse to drink. He who uses tobacco to excess is, in common parlance, mad for it, but none of them is beyond accountability for the indulgence of these impulses and desires.

The government of insane asylums is a standing contradiction of some prevalent theories respecting insane criminals. It goes upon the assumption that the unsound of mind are influenced by motives, and can be restrained by fear. One of the most eminent of our physicians, on being asked by me whether the insane are not affected by the fear of punishment, answered: "Yes; there is scarcely one of them who, if he wasted his butter, and were told that if he wasted it again it would be taken from him, would not refrain from doing so."

Bucknill, on this point, makes the following observations: "On the other hand, freedom of will, the fountain head of responsibility, is interrupted by the cerebral disease, but not wholly interrupted. If strong motives are addressed to the patient, he is capable of controlling the manifestations of the malady under which he suffers. 'I am convinced,' says Langerman, 'that, even in the highest degree of insanity, there still remains a trace of moral discrimination with which we may connect the train of the patient's ideas. The extent to which the insane are capable of controlling their actions is conspicuous in the wards of a well ordered lunatic asylum. The medical officers of such an institution find some two or three per cent. of the patients whom no moral influences appear to touch; but the vast majority are enabled, with a little encouragement and assistance, to control their passions and emotions with nearly as much success as the people out of doors.'"

The law contradicts itself, moreover, in a remarkable manner. It will not excuse a man who violates it ignorantly, even though the act done be harmless in itself, as, for example, ferrying without a license, or buying lands in suit, both of which are misdemeanors; nor will it excuse one who, in a fit of intoxication, commits an act of violence upon an-

other. The reason given for the former is that all are bound to know the law, though ignorance may enter into the question of motive. He who does not know whether an act is contrary to law has not a knowledge of right and wrong, as determined by the law in reference to that act. So the reason given for the latter is that the offender made himself drunk, but the punishment inflicted is not for getting drunk, for that is only a slight fine, but for the greater offence, the law taking no account of the mental disturbance which the intoxication has wrought. Then the insane are, with rare exceptions, admitted as witnesses; but witnesses who swear falsely are amenable to the charge of perjury, and it would be absurd to allow one to testify, and by his testimony to cause another to lose his estate or his life, and yet, when the witness is called to account for his testimony, to excuse him on the ground that he was insane.

My position then is, that emotional insanity does not excuse an act otherwise criminal. In saying this, I consider emotional insanity by itself. I might say the same thing of perceptual insanity. Neither of these forms, considered by itself, or in connection with one another, exculpates an offender; but I by no means assert that either, or both, may not lead to or be mingled with those other forms of insanity which do exculpate.

The disrepute into which the defence of emotional insanity has fallen is owing to the fact that this form of the disease has been put forward as a defence by itself; but it must not be forgotten that it may and does often lead to the other forms, viz., those of intellectual or volitional insanity. Bucknill says: "Of late years the opinion has been gaining ground among the best psychopiatists that, with few exceptions, the embarrassment of the intellect is secondary, and consequent upon the disorder and perversion of the emotive faculties." * * * "Insanity is always in the first instance emotional." * * * "Intellectual insanity is always secondary." And in another place he says: "Sound philosophy

points to the emotive part of our nature as the common if not the only source of mental disease."

Intent is a necessary ingredient of crime. There must be a union of act and intent. What is here meant by intent? Not the intention to do a moral wrong, as judged by the conscience of the actor, but an intent to do the act which the law pronounces wrong. This intent the actor must be capable of forming before he can commit a crime and be justly subject to punishment.

It must never be forgotten that insanity is a disease, and whether it be scientifically accurate to say that the *mind* is diseased, it is true that whenever there is insanity there is a disease of the brain, so that if the brain is not diseased there is no insanity. This consideration disposes of all those cases in which the act is done in the heat of passion or in a moment of frenzy. Few homicides are committed except in passion or frenzy. A murder in cold blood, deliberated on beforehand, is a rare occurrence; but no matter how hot the passion, or how fierce the frenzy, that is not insanity; and the question comes at last to this: Was there a disease of the brain? which is to be proved, like any other fact, by those competent to testify in the matter.

I cannot leave the subject of this paper without expressing my earnest conviction that the knowledge of mental disease has now arrived at such a degree of accuracy that there should be a new classification of punishments. The present classification is a great improvement, doubtless, on its predecessors, which were the product of a ruder age; but we have not yet, by any means, reached that perfection of classification which the present state of our knowledge justifies and requires. The quality of the act, as measured by the degree of intelligence, should enter into the question of the degree of punishment; and, while it may be true, as I have already said I think it is, that perceptual and emotional insanity should not exempt from punishment, I still think that the punishment should be graduated more than it is according to the mental condition of the offender. It does not accord with our

notions of justice that the strong and hardened ruffian and his weak and greatly tempted brother should, for the same outward act, suffer the same punishment. What I contend for is this, and this only, that emotional insanity should not exempt from punishment; and that so long as the law affixes only one degree of punishment to the outward act which the offender has committed, whatever may be the inward thought, that degree of punishment should be inflicted.

And I must also think that, whenever the administration of the law is brought to that state to which our advancing civilization must bring it, the question of insanity will be separated from other questions, and medical men will sit with the judges, as assessors or experts, to aid in the decision, . . . in some such manner as nautical men now sit in the English Admiralty upon cases of collision.

Having passed thus rapidly over this vast field of inquiry, we are able, I think, to state the following propositions as the results :

1. Children under the age of discretion, idiots and imbeciles are not within the discipline of criminal law.

2. The mental unsoundness of other persons, commonly designated as insanity or mania, is, in itself, or is attended by, disease of the brain, so that no heat of mere passion and no degree of mere frenzy can in any just sense be pronounced insanity by either of the professions.

3 The defendant's notion of the moral quality of his act is not a proper element in the determination of his guilt or innocence before the law.

4. The questions to be submitted to the jury, in cases of alleged insanity, are—first, was the defendant capable of knowing that the thing charged against him was a violation of law? and next, was he capable of resisting the temptation thus to violate the law?

5. Neither perceptive nor emotional insanity by itself, nor both together, can be accepted as excuse for criminal responsibility.

6. Intellectual or volitional insanity absolves from criminal

responsibility when, and only when, the reason has lost either the power of choice or the power of controlling the will.

7. In every case of acquittal on the ground of insanity the defendant should be forthwith placed in a lunatic asylum, and there kept until it is proved that he is restored to such a state of sanity as to remove all apprehension of a recurrence of the disease.

8. The present gradation of punishments is unsuited to the present condition of medical learning, and a change is required which shall make the law punish, not only according to the harmfulness of the outward act, but according to the quality of the inward spring of action.

FELONIOUS HOMICIDE:

ITS PENALTY, AND THE EXECUTION THEREOF JUDICIALLY.*

BY ALONZO CALKINS, M. D.

“The voice of thy brother’s blood crieth to Me from the ground.”—GEN.

DOUBTLESS we all entertain the conviction that Civilization, if occasionally set back by a reffluent wave, is, in the general aspect, on the advance. We do not, at this day, thrust into a furnace seven times heated a captive Jew for failing to bend the knee before a living idol as personated in a regal despot; we do not spike to the cross a general for losing a battle, as the Carthaginians treated Bomilcar; we no longer roast at the stake recusant heretics, as were wont the minions of Torquemada at Seville; neither do we bind between the axles of two harnessed chariots, to tear limb from limb, a delirate enthusiast for attempting the life of a *Dei-gratiâ* potentate, as Ravallac was served by Louis Treize; but (what is well-nigh as repulsive to a sensitive mind) we first gird the murderer’s neck with a hempen cord, and then jerk him into mid air, and as if beyond the verge of one world into the unexplored profound of another.

2. *Crime* is an infraction of the *Lex Scripta*, Statutory Law; *Penalty* is the award affixed to such crime. *Felonious Homicide* is the taking of life by violence, with malice aforethought, control over the will-power being unconstrained. The *Penalty* ordained is prevailingly *Death*, effected either by *Detruncation* or by *Hanging*.

* Read Sept. 25, 1873.

3. "The *Foundation of Punishment* (Blackstone) is the putting of offenders beyond the power of doing further harm." So Mr. Field: "The purpose is neither revenge nor retribution; the punishment itself operating not by way of satisfaction, but of prevention." With these agrees Lepelletier, also, in his observations upon the *Code Pénal*: "Tout le monde est d'accord, que le peine de mort doit être réduite à la simple privation de la vie."

4. *Penalty and Punishment*—terms often used as interchangeable synonyms, are nevertheless to be distinguished in idea. Every punishment is a penalty of course, but not a *converso* is every penalty a punishment. This last implies suffering, corporeal or mental, or both. Driving a team at a trot over a certain bridge is a finable offence, suppose. The sportsman, abroad with his dashing greys, throws down his V before the Justice, and with a jest on his lips, he bids the magistrate a good-day; the farmer, who in his plain demokrat had followed suit, pulls out his greenbacks one by one, hesitatingly and grudgingly, and leaves, cursing his stars for his temerity to the week's end. Punishment here is all one-sided.

5. Further: Punishment positive and not theoretical merely involves a *lapse of time*. The insurgent Sepoy lashed to the cannon's mouth, within two seconds from the pulling of the trigger is blown into ten thousand atoms. Here is no interval for suffering, as no sooner has the peripheral sensation reached the central perceptive organ than that organ is dissipated on the four winds of heaven. *E contrario*, under the repeated strokes with the thong of hippopotamus-hide the agony is so excruciating in the prolongation, that death, often ensuing, is a mercy. It is not so much the *mille pereundi figuræ*, the imaged shapes of death, as the *mora mortis*, the protraction of the torment, that strikes dismay into the shrinking soul (*v.* Beccaria.)

6. *The Inequality of Punishment* meted out to the criminal irrespective of desert, forbids the exercise of severity. Here is a signal verification, as recorded in the *Universal Magazine*

for 1775. On a Monday morning (hanging-day at Newgate), among the four culprits was a lad, Morley by name, doomed to the gallows for having robbed a farmer's son of a sixpence; (thus fulfilling the saying then current that theft to the amount that would buy a halter would hang a man): Fauntleroy the forger, in whose coffers the dowries of widows and the portions of orphans to the amount of hundreds of thousands, were furtively shut up beyond reach, suffers capitally, and precisely in the like way. Jane Grey, for passive complicity only in the Protestant league, is doomed to the Block, just as was Mary Queen of Scots for active intrigue with the Norfolk faction. Marie Antoinette, recoiling from before the dictatorial Gironde, is ordered to the scaffold; Madame Roland, a hearty sympathizer, but rebellious against the exactions of the *Mountain*, is guillotined in her turn. Danton, satiated with the spectacles of human gore, meditates a general amnesty, and is written down forthwith on the list of the proscribed; his rival in the Revolutionary Triumvirate, the arrogant, the vain, the moodily-selfish Robespierre, who, if his single fiat had sufficed, would have consumed in one common holocaust the entire section of the Girondists, perishes himself at last, but only as his confrère had suffered. The same incongruous associations stand out in the centuries back. Brinvilliers, the Medea of the seventeenth century, doomed to the faggot-pile, was graciously allowed the concession of a prior decapitation; La Voisin, her deft pupil, was burned in chains. Is there not a thwarting of even justice, in the apportioning of punishment even at this late day? Lusignani, suddenly frenzied on seeing an idolized wife in the embrace of a vile paramour, gives his enemy the fatal stab, and swings therefor; McFarland, nursing his wrath for months together, and by and by lying in wait for the coming of his unwary victim, goes at large again, exempt, too, even from surveillance.

7. Moreover there is to be reckoned into the account the *Disproportion of Executions* as compared with the murders

committed. Here are presented certain statistical confirmations :

Great Britain, 1866—272 homicides, 26 convictions ;
12 executions.

France, 1854—43 c., 12 ex.

N. Y. City, 1866—7—8 h., 4 ex. ;

Do. 1872, (Dr. Russell), 65 h., 1 ex., (a man
of color).

8. *Calculating the Chances.* Under the dominance of impetuous passion the would-be felon takes no thought reaching beyond the fatal act ; only the self-collected and cautious plotter proceeds upon a matured decision. There was arraigned one time at the Norfolk assizes, England, a highway-marauder, who in reply to the question put by counsel—"How could you after your repeated experiences go back to the old practices?"—made this answer : " Ah, that's the very thing ; I had reckoned up the probabilities of escape through the uncertainties of the law, or else the quibblings of the lawyers and the mystifications of a jury, as at twenty to one ; really, sir, I had no idea of ever coming to this !"

9. *The Rigor of the Law* also stands in the way. "*Summum jus, summa injuria*—Justice perverted is justice subverted," saith Cicero ; and Montesquieu thus echoes the declaration : " L'atrocité des lois en empêche l'exécution." Draco, Archon of Athens, A. C. 600, made punishable by death all felonies whatever ; Moses, and Mahomet afterward, multiplied the death-penalty most immoderately ; and even so late as Blackstone's day, a century since, of the hundred and ninety enumerated forms of crime a large part were capital. But law pushed to the extreme is prone to overreach its end, and thus to become a *brutum fulmen*, a practical dead-letter. Juries too, ever averse to sitting in judgment when the life of a fellow-man is compromised, are swift to turn to availment any qualifying circumstances that may afford a plausible pretext for disagreement or doubt. A boy

on trial for arson in a Philadelphia Court (4 Dallas) ere the penalty had been reduced, was acquitted; tried immediately after for a misdemeanor, he was convicted, and upon the identical evidence adduced before.

10. Conformable to the theory of Punishments as thus far elucidated, is in its tenor the Constitution of the State of New York, which excludes in terms the infliction of "all cruel and unjust punishments" satisfied in being rid altogether of all malignants, whose continued presence, though under a qualified duress, might imperil the common weal.

11. Wherein is to be sought the *Fundamental Law of Capital Punishment*? Not in the *Biblical Precept* (so called)—*vide* Gen. ix., 5, 6—but rather in that great Moral Exigency, *Dire Necessity*. The English version of these two passages as tried by the Septuagint is at fault. The two words on which the criticism turns are *exetése* and *ekchuthésetai*—two futures, contingent, not statutive, predictive only and not mandatory. The Greek texts in taking the Imperative construction would require the intervention of *boulomai* with an infinitive, *vice* the tense-future, so that the amended passages should read—"At the hand * * * shall I require," etc., and "Whosoever sheddeth * * * by man *will* his blood be shed," etc.

12. In the centuries far gone there appears to have prevailed by common recognition and consent a universal law as pertaining to crime—the *Lex Talionis*, or doctrine of *Retributive Compensation*. The principle, as set forth in Ex. xxi, Levit. xxiv, and Deut. xxx, is in these terms: "Eye for eye, tooth for tooth, hand for hand, foot for foot, breach for breach, burning for burning, life for life." In the *Choëphoræ* of Æschylus are found the lines as thus translated by T. Lewis:

"For blood must blood be shed—a law by age
Thrice holy: * * * from the slain
Erynnis calls aloud for vengeance still."

Cain after murdering his brother exclaims—"I shall be-

come a fugitive and vagabond * * * and whosoever findeth me shall slay me"—and so he flies to a stranger-tribe where he may elude indentification. Lamech, of the fifth generation from Cain, looks for a seven-fold vengeance upon himself, inasmuch as he has had before him the example of his remote progenitor. The preceding interpretation is justified by the significant fact, that between Cain's day and the debarkation of the Arkites upon Ararat there had intervened a period of above fifteen centuries.

13. That this *Right of Retaliation* obtained extensively among the primitive peoples, is manifest. While the Israelitish horde are yet sojourning on the Nile-delta, Moses having one day smitten to the ground an Egyptian, in requital for the killing of one of his own brethren, flies to Midian, and there abides several years or until the incident shall have passed from the public mind. Dichotomy as enforced upon Agag by Samuel at Gilgal (I. S. xv), is an instance, as also the subjecting of the Rabbites to saws and axes and a roasting in the brick-kiln (II. S. xiv). The *quid-pro-quo* idea appears indeed to have taken fast hold of the Jewish mind to the latest, for Peter on occasion unsheathes his sword for the defence of his Master (Matt. xxvi); and in the latest of the Sacred Books (Rev. xiii) is found this distinct allusion—"He that killeth with the sword must (will) be killed with the sword."

14. This *Law of Retaliation* appears to have been recognized extensively of old time among the tribes of the Orient, and to have secured an unbroken transmission, as in Persia (Malcolm), and among the hordes of the Caucasus. As evincive of the force of traditionary usage is the case of a feud instanced by Burkhardt between two Arab families, which subsisted forty years, awaiting the opportune day.

15. *Evidence Corroborative* of the forgoing view is deducible from the existence of a collateral institution, the *Compounding* for a murder by the payment of *Blood-money*—what was known under various appellations, as *Lutron* with the Hebrews *Poiné* or *Poena* among the Greeks, *Thar* in Arabia, to the

Scandinavians as *Wyr-gilt*, and to the Saxon as *Blud-wite*. Mahomet, Childebert, Charlemagne, and Alfred too (Hal-lam), issued ordinances defining and regulating this *jus* or *privilegium*. Moses too, during the nomadic period, found some restrictive degree requisite in this regard (Numb. xxxv).

16. *Retaliation literal* would be practicable in exceptional instances only; in others, approximatively. The Locrians demanded eye for eye; Solon exacted two eyes for one. Henry III., in case of rape, punished the perpetrator by the destruction of both, with sexual neutralization besides. As to the killing of a *beast*, money might secure an indemnification, what the exaction of a life would utterly fail of.

17. "Life (elegantly observes Dr. Watson), rests upon a real Tripod, the Brain, the Lungs, and the Heart; either of which failing in function, life expires." Death by *Syncope* begins at the brain, by *Asphyxia* (*Apnoea*, rather), at the lungs, by *Asthenia* at the heart. The *Apparatus* in established use for the taking of life under legal forms are the *Sword*, the *Axe*, and the *Guillotine*, each of which effects syncope with general paralysis; the *Garrote* which produces death triplicated as it were, causing asphyxia simultaneously besides; and the *Gallows*, which may produce asphyxia alone, or paralysis besides, according as strangulation simple follows or as the spinal-cord is involved.

18. *The Sword*. This instrument in dexterous hands has not its superior for the main purpose, as the cuirassiers of Napoleon found to their cost on their first charge upon the Mameluke cavalry in Egypt, 1799. The cimetar in the hands of these foeman would take off a man's head (or a horse's either) at one stroke. In the Taeping Rebellion, Commissioner Yeh being in authority, prisoners were taken to Canton, the Aceldema of the time, and there decapitated in gangs, a hundred perhaps on a morning. The culprits having been disposed side to side and face down, the executioner, preceded by an assistant to steady the head by seizing the pig-tail, moved along the line, averaging but five seconds at most

to each man, and rarely making a miss. At Constantinople the headsman is known as the *Capidji-Bachi*, the officiator upon refractory viziers, speculators and murderers. In Sweden they have substituted the *Sickle-sword*, so called. Among the victims bearing a historic name was Cicero, to whom forcibly applies a line of the great dramatist—

“ Nothing in his life
So well became him as the leaving on t.”

19. *The Axe and Block* Devoted especially to traitors of noble lineage, and in France as well, the Axe takes us back to the reign of the Conqueror. The same is emblemized in the *fascies et secures* of Rome under the Dictators. Two sons of the first Brutus, for intriguing with the exiled Tarquin, are said *securi percussi* (Livy). Under the Plantagenets and the Stuarts, *Evisceration* was an accompaniment. Thus Sir Everard Digby, implicated with Fawkes in the Gunpowder-plot, 1606, first had his heart torn out—(so says Anthony a-Wood). The axe is a clumsy instrument at best. The gallant Duke of Monmouth, sacrificed to the jealous hate of that dastard, James the Second, had his neck well nigh hashed into chips (*v. Macaulay*), in 1685. Similar was the disposition of the Count de Chalais at Ratisbon, whom Richelieu had proscribed.

20. *La Guillotine*.—“ *La Machine*, qui simplement nous tuera ”—(as satirized by Peltier, a highwayman, and the first trial-victim, in 1792), has a history—for inventions in this utilitarian day do not start into being perfect in their beginnings, as when Cadmus sowed dragons’-teeth which forthwith sprang up in full panoply)—appearing in its rudest contrivance four centuries since as a *Broad-axe* worked with a mallet, then as the *Planke du diel* (Devil’s platform) of the Germans, the *Mannaia* at Genoa, and later, as the *Maiden*, until finally adopted, in its present improved form, by the Paris Directory. Of earlier victims was Beatrice Cenci, the beautiful and illustrious but most unfortunate of her sex, condemned at Rome, 1599, on the doubtful charge of parricide.

Morton the Regent was the first to prove his own chosen machine. A familiar designation, suggested from the name of Baron Louis (an examining Commissioner) was, "*La Petite Louison* ;" another soubriquet was the *Coup-Têtes*.

21. The essential parts are two upright posts mortised into one end of a platform and grooved on their inner face, the *couperet* or axe depending from a cross-beam above, and the *lunette* for steadying the head. The victim having been bound down in the prone position with head projecting, the axe thus far held in place by a ratchet-spring and now liberated descends *au decliv*, with a force equal to the pressure of 12,800 kilogrammes (Du Camp), making the section near the root of the neck. The time required from the arrival of the cortège at the scaffold to the tumbling of the head into the pannier is about six minutes. In 1793, 21 Girondists were despatched in thirty-one minutes—"21 illustrious heads in 30 and 1 minutes," as M. Thiers speaks of the mournful array. Fouquier-Thienville made the boast, that he at a later date had disposed of 62 of the same party in 45 minutes. All told, the victims within the Conciergerie at Paris and in other quarters numbered, according to a chronological table of the day, about 7,000. Of the distingués Louis XVI. led the van:

22. *Intercurrent Sensations*.—Between certain of the insect and reptile species on the one part and the mammals and the human family on the other, there is a non-accordance here. Divide the jugum of a wasp, the barb will yet sting for an hour after or more. The head of a rattlesnake has been known to strike its fangs into a man's boot several hours after the division. An experiment made at Fulton Market, New York, some time in the winter of 1872, upon the head of a snapping-turtle after severing, showed that the *vis vitæ* might survive, energetic in action, for weeks. The turtle of the Gulf, however, assimilates herein to the warm-blooded genera, but the correspondence abruptly fails as we reach the higher forms of animal life. Strike off the head of the barn-yard cock, the upper lid droops, the cornea is dimmed,

and the pupil already fixed. Observations made at the abattoirs coincide.

23. As concerning *Human victims* (to speak somewhat in paradox), the negative evidence outweighs altogether the positive. Hindreich of Paris declares, that only a half-dreamy consciousness if that survives in any case; Roch, operating one time at St. Omer's, caught a head in its fall, but every vestige of life was already gone; and, indeed, as he remarks—"Le couteau tombe, c'est fini." The blush (or *flush*) said to have suffused the cheek of Charlotte Corday, was an invention for a purpose. At Algiers, 1833, there was made by M. Bonnafont what might be reckoned a *crucial* experiment, conducted upon two Arab victims. Each head having been caught up as it fell, the neck was forthwith dipped in a jar of pulverized gypsum (for stanching the oozing of blood), a lancet made scarifications upon the cheeks, and their names were shouted in the ear through a trumpet, but the countenance relapsed into a fixed immobility, coldly complexionless, and impassive in death. The guillotine, viewed as a means in adaptation to its end, may be eminently pronounced, a *chef d'œuvre*. There lie, however, two serious if not insuperable objections against all inventions suited to decapitation; firstly, that they break the continuity of the body, but secondly, that they open up rivulets and pools of blood.

24 At the last we reach that *monstrum horrendum*, that ghostliest and ghastliest of all contrivances for the infliction of a death-penalty ever cogitated into being by mortal man, the *Gallows*. The essential parts are, a platform with a central trap-door, and two posts set upright and surmounted by a connecting-beam, from which last depends a cord with its terminating noose. On the Kent side of the Thames, and elevated upon a high rock, there long stood, even into the reign of William IV., a *Gibbet* as known, designed primarily for use upon pirates. Its peculiarity consisted in a fenestrated iron crate, with a suspending-chain, in which the body was left exposed to swing and sway hither and thither be-

neath sun or pelting storm, until the natural progress of decay should have left undissipated the bare skeleton only. Kidd, the sea-rover, hanged at Execution Dock, was gibbeted after, 1701, and in 1759 the self-accusing murderer, Eugene Aram. Camden attests to the case of a victim gibbeted alive and thus left to starve.

25. The *Primitive Gallows* appears to have been a *Tree*, familiarly used among the Teutons, as upon traitors and adulteresses (Tacitus). Ovid has a corresponding reference, but Virgil (Aen xii) describes the Latian Queen as swaying from a beam. To a *ceiba* it was that Guatimozin was strung by his cruel persecutor, Cortez. The Scandinavians were wont to select a tree rising from some tumulus. The forest of Plessis-les-Tours abounded with sights of victims. Heber makes mention of four huge trees quadrangularly placed in front of the Almorat Gate (Calcutta), which, early in the present century, had their daily consignments. In Britain the oak answered for forest-rovers, a yew-sappling supplying the cord, as did the willow in Erin-land. Early in the revolution of 1789 the Lamp-post (*la sinistre lanterne*) afforded a ready contrivance, as during the bread-riots, suggestive of the screaming cry that rolled along the barricades, "A bas, les compables—a la Lanterne!" The Marquis de Fauvas was the first thus singled out, 1789.

26. At *Tyburn* a ladder was originally used for the condemned to mount by, which being pushed away at the proper moment left the body to fall its length; but by and by an improvement was devised by one Brodie of Edinburgh (himself the first case of illustration), in the provision of a platform, with a *trap-door* opening downwards. When André was executed at Tarrytown in 1783, a wagon made the temporary support. This same year Newgate became the gallows-plaza.

27. *The New York Model*.—By this method the body, instead of being allowed a free fall, is hoisted by a counterpoise-weight. The name of the illustrious mechanic who in this modification has undertaken to invert in a manner a

law of dynamics, the trumpet of fame doth not as yet appear to have caught up. As of "*Le Médecin Malgré Lui*," who, upon the intimation that he had got the heart on the right of the spinal axis instead of the left side, replied: "*C'étoit àinsi autrefois, mais nous avons changé tout cela*"—so of the disarrangement of parts here. Under the use of this counter-balance, there is for a given length of fall a very considerable loss of force, according to the formula $(b \times 2 + w) / w$: i. e., if the body weigh 140 lbs., and the opposing weight = 300, the working force for a constant space is only as 1 : 1.93; if $w = 500$, the force is as 1 : 1.56, a loss very considerably reduced. The weight used upon Avery at Hackensack was 280 lbs. only. At the Tombs, N. Y., the weight is about 300.

A yet weightier objection lies here, that the power is graduated from the *minimum* velocity, contrarily as by the Drop, thus allowing the neck to accommodate itself to the strain; and so luxation, as a result, is a fallacious expectation.

28. *Hanging at Sea*.—The cord having been reeved through a pulley aloft, a relay of a dozen men take hold and go forward on a run, and the victim is forthwith swinging from the main-yard. Admiral Byng off Portsmouth, 1757, and the Spencer-trio of the Somers, are instances.

29. When or where originated the *suspendaur-per-collum* (susper-col) formula, does not distinctly appear. The word *Gallows* is Anglo-Saxon, having no congener in any ancient tongue. The bas-reliefs of Egypt present no corresponding figure (Rawlinson); and as to the "chief of the bakers" (Gen., xl), the language of the Septuagint (*Aphelei tén Kephalén Kai Kremasè epi Xulon*), indicate plainly that death by decapitation preceded the suspension and exposure.

30. In the British Museum is preserved a stone slab, an Assyrian relic, one face of which exhibits a beam with transverse grooves accommodated to the form of the human chin, and from which several culprits arranged in file are depending. The mode of death as here indicated was strangulation certain.

31. The *Hebrew Records* are devoid of all allusions to agal-lows proper. Saul's sons were killed on a certain day, and their bodies nailed to the walls of Bethshan, but subsequently (1 Sam. xxxi). The two sons of Haman were slain (in the general massacre instigated by Esther) on the 13th Adar, and hanged and exposed on the 14th (Esther vii and ix). The presumption regarding Haman himself is of like tenor. The fickle-minded and irascible Xerxes (Ahasuerus), incensed at what he construed as a demonstration upon the queen, makes a sign to his officers, whereupon they seize the audacious favorite, and, having veiled his face, withdraw to a private chamber and there apply the cork to his neck. All this comes to pass at the banquet hour in the evening ; on the morrow the body is elevated and exposed.

32. Death by *Strangulation* Series of Phenomena. The body precipitated and abandoned, there is usually an interval of immobility, lasting a minute perhaps (save in the swinging around once or twice from the tendency of the cord to untwist itself upon a strain), brilliant flashes then flit before the eyes, and ringing sounds not unlike oppressive music fill the ears, the legs feel an unwonted heaviness and drag, the face becomes phlogosed from constriction upon the external jugulars, and the tongue, also congested, often protrudes. The brain itself may be anæmic. Consciousness, variable in continuance, may be early interrupted (Tardieu),* and convulsions or throes, moderate or intense (though automatic only after the repression of sense), are present in the majority.

33. *The Cord*.—The progress of strangulation is regulated much by the position and action of the cord. If there is free play through the spiral knot an equable pressure is established all around, and but that the internal jugulars as being more deep-seated are less liable to compression than the carotids, a blood-stasis might be established. The *Clove-Hitch*, as adverted to on the Avery-Cornell trial, is unadapted to the exigency. *Laceration of Trachea* is very rare ; Dr.

* *V de De la Pénalaison, Annales d'Hygiène Publique, 1870*

Plot, who figured somewhat in the reign of Henry VI, describes an escape through ossification of the part.

34. The popular notion that constriction is most thorough when the knot is disposed *under the ear* (*i. e.*, over the carotid of that side), is a misconception. Bring the knot to the sulcus above the pomum Adami, it makes a *point d'appui* in front, having for its *pièce de résistance* or fulcrum the rigid vertebral column aback. With this arrangement a short fall suffices, as appears from records kept at the Mazas Prison in France. Of 261 deaths from suicide, effected here prior to 1870, most of the bodies when discovered were found touching by the toes or else resting upon the knees; a few were asquat, some had a foot raised upon a chair. The explanation is this: out of 143 cases specified 117 had the knot in the sulcus, 23 opposite the laryngeal box, and three only over trachea below, but below the ear not one. Burke, the dissecting room caterer, had a way of seizing the throat by a grip from behind, the thumbs, one over the other, being pressed into this same sulcus.

35. There is another idea afloat, that a *Bull-neck* makes a slow death. Doubtless the *vis inertiae* or sag of an athletic frame may scarcely in instances overbalance the physical resilience of the subject, and of consequence violent struggles may supervene. Gibbs, hanged at Bedloe's Is., 1831, suffered mightily, as did Payne, one of the four Lincoln-plotters. The negro Hanky Jones, now beyond the natural span of life and so of reduced animal stamina, with the further advantage of a ten-foot ball, nevertheless likewise suffered as acutely, or yet more so.

36. *Surviving Sensations under Strangulation.* What is the precise quality and what the degree of intensity of the suffering during the agony, is conjectural only in part. Fleischmann in his own case remarked, that following the slight uneasiness which was due to the tightening of the cord there was no conscious uneasiness. A woman (Faure), resuscitated after a suspension of 7 minutes, lost all sense whatever the instant after launching off. Montaignac, saved at the inter-

cession of Turenne (the cord having snapped), declared that all pain vanished in a moment and that in the acme of the paroxysm a vivid light pervaded his entire body, conveying a transcendent charm. (Congestion of the brain was the proximate cause here.) Provided syncope be pre-established any recurring convulsionary struggles may be mere reflex movements barely, like as when the heart of a fish detached from the body, will yet throb under puncture, hours after. The current saying, "Hanging is too good for him," is thus iterated in Titus Andronicus, where Lucius, the avenger of his hapless sister, in disposing of the monster Aaron, makes this utterance :

"Bring down the devil ; for he must not die
So sweet a death as hanging, presently—
Set him breast-deep in earth and famish him."

37. *Drowning* throws some light upon this speculative inquiry. The physiological processes being very similar (air being excluded *ab extra* in the one case and air and water together being rejected instinctively in the other), the sensations would supposably correspond. Dr. Binns says, the idea of death, horrible *per se*, was speedily effaced by entrancing visions. Adam Clarke's experience was of the rapturous kind, and meanwhile the events of his entire life seemed to glide athwart his eyes as if in a panoramic procession. Taylor, Hoffman and others give corroborative narratives. Dr. Lettsom after repeated inquiries could find no testimony favoring an intermediate consciousness; Alibert, on the contrary, upon questioning many persons who after either jumping or tumbling into the Seine had been dragged out alive, was answered in most of the instances to the effect that the experiences are horrible beyond expression. Whoever has repeated the experiment of drowning under a hydrant a caged rat, will be but very slowly persuaded that the sensations in hanging are prevailingly of a delectable kind.

38. In the land of the Ottoman the *Bow* is the favorite resort. The condemned being seated upon a divan, two stout

dwarf-mutes—" misshapen figures, monsters deaf and dumb "—bend to an extreme a stout bow, and so making a loop in the cord, dexterously throw it over the head to encircle the neck. Life goes with a few brief struggles. Polo while in Kathay witnessed a method of asphyxiating, by compressing tightly the nostrils and mouth.

39. Analogous to strangulation is *Suffocation*. The two princes, children of Edward IV., confined in the Tower by the Hunchback, were smothered between bed pillows. The Rhenish tribes (Tacitus) buried adulteresses in peat-bogs. In Algiers Marshal Pelissier once smoked to death a native force that had retreated to a stronghold, a cave of rocks.

40. Into this class falls *Enterrement Vif*. Paretta Mauger, *voleuse*, was earthed up to the neck, by Louis XI. The assassins of Count Capo d'Istria were walled up to the chin and starved, 1831. Such practices were not unheard of as concerning the ladies of Baronial halls.

41. The *Peine Forte et Dure*, consisted in superimposing a heavy weight upon the chest, that should suffice to reduce the breathing to a gradual minimum. One Johanna Quick, for *speaking slightly* of that very techy ruler Henry VI., was a case.

42. *Luxation, Fracture*. If syncope intervene, whether through sudden fright or extreme lassitude incident to a protracted imprisonment, fracture may be expected; luxation is more likely when the muscles have been thrown into spasmodic tension under the expectancy of the event. The pathologic condition either way is compression of the Spinal Cord, with laceration complicating perhaps. The diagnosis is determinable from the slight tremor coursing adown the body and limbs, and the ensuing muscular adynamia, a symptomatic paralysis. An illustration is the way a black-and-tan having a rat by the nape, lays him out in one single shake. Luxation is favored if the knot occupy the *sulcus*, as was shown in the case of a suicide-prisoner at Mazas, whose fall was so short that the toes reached the floor.

43. *Elongation of the Neck*, referable to the elasticity of

the intervertebral discs, is a regular occurrence, as was apparent in the suicide of the Prince de Condé, which occurred in 1830, the toes in this case finally resting on the floor. Samson (M de Paris), a famous *bourreau* in 1789 and before, had a way of springing upon the shoulders of his victim,* and then giving the body a twist from side to side, so that a luxation was certain. A subluxation would be ineffective. A patient, Miss S., having one day got her head set awry on one shoulder, in making a sudden side-turn, went this way for six weeks, when a spontaneous restoration occurred.

44. The *Dentatus*, formerly supposed the yielding part, is a rarity as such (De la Fosse). Devergie, in 52 examinations, detected but one instance of rupture of the supporting ligament. Dr. Eve also states, that of 25 bodies first and last taken into the anatomical theatre at Louisville, not one showed this form of deviation.

45. *Le Vil Garrote*—thus stigmatized by the Transalpines—is a Moorish legacy through the Goths to Spain. The primitive fashion was a cord, with a staff (garrote) interposed and held in place by a twist or two, to make the required constriction ; an extemporized tourniquet, simply. Tyndale, burnt at the stake by order of Charles V., though holding out steadfastly against a recantation, was prudently thus strangled at first—a privilege conceded by the Dominican brotherhood to such only as would recant in the trying hour. In like manner, and in the name of religion, was sacrificed by his insatiable persecutor, and with his beloved Cuzco in view, the last of the Incas, Atahualpa.

46. Suppose an arm-chair, with a slab rising from behind three feet or more, a metallic girdle for the throat in front, and connected with this from behind a stiletto-pointed pin, the two working in concert by wheel-leverage, and you have the modern machine. A six-footed negro gives the wheel two or three rapid turns, forcing the pin-point across the trochlea into the cord-substance, while simultaneously the collar is retracted so as to crush in the larynx to flatness. Lopez the

* Emmet, 1798, was thus assisted in his struggles by a friend at his side.

fillibuster, thus executed at Havana, 1857, had a speedy as well as an easy death. The chief objection to this machine is, that the collar makes a complication simply superfluous.

47. At the Communipaw abattoirs the butchers sometimes kill their beeves after this same stiletto-fashion, (what is called *Pithing*), using a lance-pointed knife. A momentary shiver is the one single symptom. At the bull-baitings in Madrid, when the contest has begun to lag, a matador creeps up stealthily from behind and suddenly plunges his stiletto deep in the nape. Thus the poet of the nineteenth century :

“Where his vast neck just mingles with the spine,
Sheathed in his form the deadly weapon lies;
He stops, he starts; disdaining to decline,
Without a frown, without a groan, without a struggle, dies,”

48. *Abstract of 65 Recent Cases, comprised between 1869 and 1873.*

Average Time in 49, 11:15 minutes. *Cord*—*Right* or *Maladjusted* 5, *Deficient in Length* 3, in *Excess* 1, *Ruptured* 8, (repeated rupture 1).

Throes and Contortions—*Severe and Continuous* 23, *Moderate* 14, *Feeble and Evanescent* 18. *Chest-heavings* (indicative of persisting sensation) 8.

Fracture or Luxation—*Evident* 6, *Partial* 4, *Doubtful* 7, by the *N. Y. method* 0.

Fall in Feet—*Average* in 4 of the 6 cases, $7\frac{3}{4}$.

Comments. Time. Tardieu makes the medium 10 m. Dogs (Faure) average 15–20 m. Maignant (Dr. Jacquemin) felo-de-se at Mazas, was found dead within 10 minutes. John Brown, executed at Harper's Ferry, 1859, exhibited only a few struggles, but the heart continued to beat for 35 minutes. There would seem in instances indeed a compromise-covenant as it were, entered into between Death and the Hangman, there should evolve the maximum of endurance as compatible with an unfailing result.

50. *Heavings of the Chest.* Rulloff, gallowsed at Binghamton, 1872, proceeded to his station, hands in the pockets of his pantaloons. One hand having got loose in the act of surging upward, he fumbled about until he had replaced it as before. In regard to this class of symptoms Tardieu has declared that they are in no case altogether absent, a statement too broad, certainly.

51. Such is a serial *Gallows-Tableau*, a picture hideously horrific for sure. Even could the end be reckoned as sanctifying the means, yet scarcely this when means and end are so glaringly disproportioned. Strangulations were much more decently effected by the garrote of the Moor or the bow of the Turk; Luxation, (the result aimed at in the suspension-process) occurs only in 11·7 per cent. of the trials; wherefore then subject to such supervacaneous indignity one of the common brotherhood, a being possessed of attributes and sympathies congenial to our own, a man formed in the divine image, and that image however defaced by sin and crime, yet not effaced altogether and forever? "What a lamentable thing (says Lord Coke), to see so many Christian men and women choked to death upon that cursed tree, the gallows!" Captain Fluellen, if presumably more *au-fait* at *ponto* and *reverso* than upon casuistic subtleties, is about on the square in his exclamation hereupon—"Let the gallows gape for a dog, but leave man to go free." When, when shall there cease to tingle in our ears as it reverberates along the grim corridors of yon living *Tomb*, that hoarse-voiced *thud*, as it records the desperate throes of another departing soul!

52. Ignoring speculation, let us descend to *terra-firma* fact, as drawn from *Biblical archives*. You may search the books of both Testaments through, and yet fail to come upon the first instance even of life judicially exacted for a simple homicide. Absalom, a prince of the blood, having killed several of his brothers, finds an asylum in Gerar for two or three years, then returns to the palace to enjoy an open immunity. Adonijah, Barzillai, Shimei, are put to a violent death indeed, but for reasons putatively political. Barabbas, arraign-

ed for complicity in a sedition, rather than for murder (a makeweight charge only in the indictment), even he gets his enlargement at the behest of a mobocracy.

53. The *Jewish Methods* of taking life for crime, afford in no instance any usage indicative of the hanging-process. Exposure of the body, indeed, for the fowls of the air to pluck at or the beasts of the forest to crunch upon, (and which, according to the Levitical Law, was to terminate on the going down of the sun), was a treatment not uncommon, but then either the sword or the cord had preceded. Joshua (c, x) "smote and slew, *and* hanged on five trees," Adonibezek of Ai and his four confederates. Abimelech was killed by a rapier-thrust, for certain (Judg. ix). as was Joab probably, at the hands of Benaiah (*Ancile* is the word, I K. ii). The 70 sons of Ahab, slain by Jehu in Samaria, were beheaded (II K. viii).

54. Can we, if only in the prudent view, *Abolish* capital punishment altogether? Here is a miscreant, who, in the perpetration of a series of diabolic acts, has recklessly thrust himself beyond the pale of human sympathies, one whom "Vengeance (a righteously retributive vindictiveness) suffereth not to live;" allow such a further lease of life, and what shall restrain a populace worked up to furious mood and recalcitrant at mere legal interpositions? Like as now on our S. W. frontiers, we should see inaugurated Vigilance Committees in permanence; and as in Tarboro the jack-oak, so in the streets of New York the gas-post would offer the facile resort. "That would be worse."

55. *Substitutes for the Gallows.* In the "Characteristics," the Earl of Shaftesbury somewhere animadverts upon innovators in the terms following: "Many persons have succeeded marvellously in pulling down, yet have miserably failed in building up again." To the test.

56. For the taking of life judicially, various agents and devices have first or last been suggested. The *Electric Battery* is not altogether reliable—*Chloroform* has been consecrated to the preservation of human life rather than to its extinction

—an atmosphere of *Carbonic Acid Gas* would make a painless death, but for an acceptable substitute we must fain search beyond these.

57. In 1855, Prof. Fleming of Cork, in a series of experiments, himself being the subject, verified an observation once made by Surgeon Cooper at Guy's while lighting one of the common carotids, viz., that pressure being made in the lacunæ back of the angle of the inferior maxillar bone, the two thumbs being so disposed as to embrace transversely the carotids with the jugulars, would establish an absolute *Syncope* within a very few seconds. Were a mechanical appliance sought for, this would commend itself before all others; and indeed (so says Dr. Cheevers) it has been long since made available, as being facile, speedy and certain in operation, by the Thugs of India.

58. An Alternative, transcending all these perhaps, is what may be denominated the *Chemical, Prussic Acid*—an agent in the *Materia Medica* now relegated to the class of *Toxics*. Devergie placed 1 drop on the tongue of a dog, whereupon the animal made 3 respirations, and then dropped dead. Orfila had a female domestic, who fell insensible as in an apoplectic-fit, after swallowing a medicated spirit-draught. Hufeland, Hanke, Taylor and others, have recorded illustrative cases. One nearer home, that of Pomeroy of Herkimer, is among the most notable. The dose—100 drops of Squibb's, and the equivalent of 2 drops of the anhydrous—did its work in 20 minutes. In five minutes the patient already moribund was discovered in the supine posture and unconscious, the arms being folded composedly across the chest. The pulse, now intermittent, had fallen to 50, and the respiratory acts, scarcely repeated once to the minute, grew feeble and obscure, the pupils were dilated, a coldness had crept over the livid surface, until perfect *Asthenia* or heart-death, the pathologic finale, was established.

59. Adopt either of these two resorts as specified, there would be secured in the conducting of our capital executions these *Four Prerequisites: Certainty in Result, Celerity in*

Action, Painlessness in the Endurance, and the Maintenance of a decorous Solemnity.

60. *The Spectacular Denouement.* The *Moral Impress* reasonably to be expected from our capital executions as they are, is in large measure neutralized if not perverted. The presence of numbers throws over the scene a false glamour, a *pompa mortis* (as Seneca calls it), inspiring in the victim a factitious enthusiasm, a forced bravadoism, as if he were enjoying an apotheosis by anticipation; or again a stolid or a churlish make-face with ribald slang interspersed, may give complexion to the demeanor. The hand-shaking just before the crisis between prisoner and sheriff is only an arrant burlesque.

61. All murderers are wont at the last moment, and, of course, to express the certain assurance of God's pardoning grace vouchsafed them, with a mendacious presumption a good deal proportioned to the atrocities for which they are now paying an inadequate penalty; just as if the crimson stain upon hands steeped in blood-guiltiness constituted a *passe-partout* even to the very gates of Paradise! The author of "Old-Bailey Experience" shows on the reverse a very different shading, declaring that out of every 20 professed converts 19 are shams

62. The force of *Example*—which here operates by contraries—is most depraving. In the crowd of 20,000 that Strang of Albany drew together, was one Kelly, who having got home again a day's journey after, could think of nothing, talk of nothing, but the one theme; until having fallen into an altercation with a hired man three weeks after, he shot the man, in the way Strang had behaved before. In the jail at Lancaster where Lechler was hanged in 1822, a prisoner who could see the gallows from his cell, the very night after murdered a fellow-convict, and next morning had fastened to his own wrists the identical manacles that had fallen from the other. What shall we think of a mock-hanging scene, as when a company of boys at Baltimore rigged up an effigy to

be put through a mock parade, in the very hour Palmer was enacting the reality.

63. As concerning cases of *Moral Insanity*, the existing laws are palpably loose, and more especially when the delirium is paroxysmal and of momentary culmination only. Can we afford to risk an unrestricted enlargement of this suspicious class, and especially when their achievements may peradventure be reproduced in a second edition?

64. We need an *Official Executioner*, educated for his duties in the acquisition of a certain amount of anatomical and physiological, and mechanical knowledge somewhat, in whose temper is combined the *suaviter* with the *fortiter*, as was Ketch, installed 1664, concerning whom the very classical dame observed, that "Only her husband had the secret of making a gentleman go off genteelly." The proffered *douceur* however—rated in 1647 at "eleven pence ha'penny," had its influence. *The Calcraft*, now *functus officio*, was in manner as rough as if he were hanging a dog only—so testifies ex-Sheriff Nissen.*

65. We want a further *Court of Pardons*, that shall exempt the Executive from liability to the charge of indifference, undue haste, or what is worse, accessibility to the corrupting influence of money. A third ordinance, conditioned in behalf of science, might be annexed—the subjection of the criminal's body to a *mortui-sectio* examination, as that of Earl Ferrers was disposed of at Surgeons' Hall, 1740. *Fiat iustitia*—or to give the idea a qualified shape, "Faisons le bieu, advienne qui pourra."

* *Vid.* Parl. Reports, 866, vol. xxi, Crime

LEGAL RESPONSIBILITY AND ACCOUNTABILITY.*

BY SIMON STERNE, ESQ.

AMERICAN law, both in its criminal and civil branches, is unsatisfactory in its methods of dealing with those subjects which are *quasi* of a metaphysical character. The penalty that we perhaps pay for the intensely practical nature of our Anglo-Saxon mind, and the great material achievements which are its resultant, is, that when we come to deal with intricate and delicate questions, we lack the subtlety and patience necessary for their mastery, and hence fail to organize a body of laws upon such subjects in conformity to what their natures require.

I use the words "responsibility" and "accountability" with the object of drawing attention to a distinction not etymologically inherent in the words themselves, but one which exists in fact; and I, therefore, during the course of my remarks, shall give to these words an arbitrary meaning, for the purpose of elucidating my ideas. Responsibility, in this essay, shall mean a man's answerableness for his acts to society at large, *i. e.*, amenability to criminal law; and "accountability," his answerableness to individuals arising from his obligations, expressed or implied, either under contract or from his status in society, such as husband, son, servant, trustee.

Every man of mature years is properly held both responsible and accountable for his acts, upon grounds both of public safety and private weal.

The basis of penal law is the substitution of punishment by the public for private vengeance. Society is inconceiva-

* Read Nov. 26th, 1873.

ble to us without the element of authority or command. Even in so simple a form as the *curiæ* or a single family, authority is its basis. Responsibility is coupled with the right to issue commands, and exacting, on pain of punishment, obedience thereto.

In the primitive ages of humanity these punishments were uncertain and capricious. Founded, however, upon an imperative need of society, they followed the manners, the customs, the prejudices of the institutions they were called upon to protect. But everywhere the idea which was at the bottom was the substitution of public for private vengeance, and this substitution did not, until modern times, take absolute control of the whole field of crime, as is indicated by feuds, vendettas and reprisals, which have reached down to recent times, and indeed in some parts of the world still exist. I myself witnessed in Dalmatia a scene which showed that there the right of the vendetta was recognized even until recent years. A circle was formed wherein the elders of the village took seats; the younger ones stood around with heads bared in respectful silence. A crime had been committed: the member of one family murdered the member of another family, and the elder member of the family from which a member had been torn by the murder was permitted to draw some blood from the murderer in expiation.

The first change probably came through the priesthood; the men who committed murder or pillage made expiatory sacrifice to appease the vengeance of the gods, and the priests were consulted as to reprisals, recapture and restitution. A custom thus grew up, of which government availed itself of forms and modes of restitution; the law *lex talionis* was probably originally but a rude form of vengeance. The eye for an eye, the tooth for a tooth, was probably but the mere formulization by government of a natural instinct of revenge. Even Greek and Roman law recognize this *lex talionis*, and have made it a part of their penal law. The many fines for crimes was the first substitution for this rude form of the law of reprisal, and this was carried by the Germans of Tacitus to the ut-

most extreme—they had a sum to represent almost every species of crime as damage to the injured party.

The development among each people of each nation of a central authority created a tendency for the substitution of public for private vengeance.

This authority, whatever it was, owed protection and redress to the offending party, and revenged him.

Of course, in the event of these respective mulcts or fines not being paid, personal penalties were inflicted, which varied from absolute slavery to years of servitude for the benefit of the injured party.

When you take into consideration that originally the state avenged the individual wronged, that only by revenging him could it induce that individual to refrain from reprisal by his own hands, it will explain the cruelty of all penal codes down to the present day.

The limit to the pain, governments would accordingly inflict, is but the limit which men, in their savage state, would recoil from inflicting upon their personal enemies.

At Athens stoning to death, crucifixion, burning alive, were penalties inflicted not only for a murder, but for treason, cowardice in face of the enemy, some kinds of theft, profanation of mysteries or sacrilege. At Rome the condemned were precipitated from the Tarpeian Rock, sewn in a sack and thrown into the Tiber or the sea, burned alive, crucified, thrown to wild, ferocious beasts; the tongues of criminals were torn out, and they were frequently castrated. In the middle ages it seems as though all the ingenuity which, at a subsequent period, was used to invent machinery to supply man's wants, was then applied to the discovery of human torture.

In France alone there were one hundred and fifteen different crimes punishable with death, and many forms of inflicting the death penalty. Burnings to death, horrible mutilations were numerous, splitting open of lips, cutting off of noses, ears, hands, feet, and castration, were common penalties.

It was not until the eighteenth century that some change came, and that simultaneously with the discussion of the rights of man, although Locke, and Hobbes, and Vattel had written against the system. It was not until Beccaria published his pamphlet on crimes and their punishment in 1766 that this old system received its death blow. Beccaria, while denying the right of vengeance, still insisted that the repression of crime was the main justification of the State to act.

A modern school—which makes it the duty of the State to enforce the divine or moral law, and to punish as an all-wise Creator is supposed to punish; which seeks the justification of punishment in some fancied social contract, and is careful to look into motives—has grown up, and with its fanciful theories, its weak humanitarianism and exaggerated sentimentality, has well nigh made the repression of crime impossible.

If you will constantly bear in mind that the historical basis of all criminal law is the substitution of public vengeance for the private vendetta, what will follow will appear less harsh than it otherwise might sound.

I admit that we should constantly bear in mind the possible improvement of the malefactor, also the effect which cruel and unusual punishments have upon the moral sense of the community; yet these are but subsidiary considerations; the main idea must always be that certainty of punishment which on the one hand will repress the crime, and on the other prevent the relapse into the state of the private exercise of the *lex talionis*.

Having said this much for the basis of criminal law, I shall now proceed to apply the principles historically derived, to the consideration of some of the questions of the day.

Men are to be held as responsible to the public for crimes to persons as they would be to the persons themselves, or their friends, were there no public or penal law. Motives are properly of primary importance as matter of moral law and

moral codes, but are subsidiary considerations in matters relating to criminal law when the act is intended.

In all organized society, large classes of exceptions have been made from this general accountability and responsibility. The king, in monarchical governments, being the fountain and source of all law, is above it, and is therefore neither responsible nor accountable, in the ordinary sense of those terms. Strangely enough, in our own country, the exemption of Government from suits has its origin in the same principle. Persons acting under compulsion, when that compulsion is sufficiently powerful, have been held not to be accountable, and their responsibility under such circumstances is very much limited.

Persons who cannot properly be said to have any wills at all, to wit, idiots are not accountable, and scarcely responsible. Persons of perverted wills, arising from mental diseases, or diseases which affect nerve centres to the extent of bringing the will under the control of something other than reason are generally held to be neither accountable nor responsible.

It is of the latter class—the insane—that I wish to treat more especially this evening. As wide as is the range and breadth of diseases which affect the mental organization, and hence the will power, and as various as the forms that *dementia* may take, should be the different degrees of responsibility and accountability to which that class of members of society should be held. And it is herein that the statute laws are glaringly defective—defects which have not by any means been supplemented by the wisdom or scientific attainments of the judges who apply them. There is scarcely any material difference between the class of evidence which is admissible to prove insanity on the part of a testator, and that which is listened to in a criminal court to prove insanity on the part of a murderer; and yet the mental defect which might and should affect the testamentary power of a citizen, ought not in the slightest degree to affect his responsibility as a criminal. It is the unconscious perception of this fact on the part of the

community which causes its members to regard with so much suspicion and contempt the, under proper restrictions, perfectly justifiable plea of insanity, when it is interposed in our criminal courts.

Even as to the question of responsibility, various degrees might be established, corresponding to different degrees of crime, holding those excusable only, for the most heinous of offences, who are *absolutely insane*, and who were unconscious of the act that they were doing, so as to make the act an accidental event, and, strictly speaking, not an act at all. Such a classification would necessarily and in itself exclude a vast mass of testimony which is now taken in our criminal courts upon the subject of insanity, and in future cause the inquiry to be confined to the one question, not whether the man was insane, but whether he had that degree of insanity which would render him incompetent to know the nature of the act with the committing of which he stands charged. It is thus, and thus only, that the law, in its administrative part, can take cognizance of, and keep pace with, the progressive advancement of medical science upon the subject of insanity.

It does not follow that that, which the physician, for purposes of his own, and for medical treatment, would call insanity, should be so classed by the law, except in instances where the man, for the performance of the highest trust with which society can charge him, should be in the full and free possession of all his faculties.

That nervous excitability and mental derangement, slight as it may be, which leads men to risk their all in desperate ventures—an excitability which even physicians would consider a very mild form of insanity—the law should take note of, if the person thus afflicted is a guardian of important trusts, and remove him from such trusts, so that his mental peculiarity should not affect the safety of others; and yet it would be manifestly absurd to say, that such trustee should be permitted to use the same kind of evidence, as an excuse for the murder of his ward, which the person desiring to remove him from the trust of guardian would adduce in

support of his petition. Extreme as this case is, it illustrates my idea of the necessity of a proper classification of the law upon the subject of insanity.

Society has been at work, since it exists as such, to repress certain anti-social evils, of which robbery and murder are the rudest forms. To say that the insane should be exempted from the influences of these repressive tendencies, is to impliedly assert that the insane are not subject to the influences of fear, or hope of reward; and no one who has had much experience with them, and who has had their treatment in charge, but knows that they are—to a more limited extent, of course, than rational persons, still to a very considerable extent—influenced by fear of punishment and the hope of reward. To remove the fear of the punishment of the law from their imagination has, in itself, a tendency to increase outward manifestations of insanity, because one of the main motives to correct action is withheld from them. Few insane persons injure themselves with cutting instruments, because they have consciousness enough to know that the instrument will inflict a wound if misused, without the slightest regard to the mental condition of him who uses it. Criminal law should, with very rare exceptions, be quite as inexorable. The strange revolution that takes place in the feelings towards friends and relatives on the part of persons suffering from some forms of mental disease, which causes them to regard with enmity and hatred those whom they should love and cherish, which causes them to disinherit the very people for whom they have laboriously accumulated fortunes, should cause a court to set aside a will made by such a person, on the ground that thus the injury done by the insane person can be set right, and the knowledge of that fact deter others similarly suffering from making such wills. But, for the selfsame reason, a criminal judge should sentence to the gallows him who, under such a delusion, poisons some dear friend. The knowledge of that fact would have a deterring influence even upon some other one, suffering from the same delusion, from the committing of the like crime.

Under certain barbarous forms of society it is almost a matter of course that you will kill your enemy, and that your enemy, with equal opportunity, will kill you. It is only in process of years and by slow stages that society has reached the point of overcoming the barbarians in its midst, and preventing its members from gratifying passion or seeking revenge by such a method. The insane person is upon that point a barbarian. He imagines his friend to be his enemy. But his insanity goes no farther. If permitted by the law to kill his enemy, he will do so. If deterred from it by the fear of punishment, by the knowledge that in killing his enemy he endangers his own life, many lives would be, or in any event may be saved. Anything that involves a *plan* on the part of the insane person which embraces the calculation of probable events sufficient to enable the criminal also to take into consideration the probable event that he himself will be hung, should be punished precisely as though the person were sane. A crime, however, committed by one unconscious of *the act itself* cannot in any sense be considered a crime; it is a mere accident, and the person who unconsciously commits it is blameless. The man who in a fit strangles another, without being conscious of the fact that he is strangling is blameless. The man who in a paroxysm kills another without the intent of doing the other any injury, and there being no ill-will between them of any kind which would justify the presumption of any such intent, is blameless. Mary Lamb, who killed her mother, committed no crime. At the time of the act she did not know that it was her mother. She did not know that she was killing. She did not even know that she was injuring her. It was a curious and, though a natural, certainly a mistaken tendency, which until very recently had taken possession of the medico-legal mind, to suppose that the refinements of physicians upon the subject of mental diseases should necessarily be taken cognizance of by the criminal courts; and many a judge refrained from rigorously excluding testimony which was improperly offered, from the motive, doubtless, that he feared that he

might be suspected by scientists to be behind the age. There is but little justification, I apprehend, for the complacency and self-satisfaction with which our *pseudo*-enlightened medical legal jurists look upon the rigorous common law with its simple test of insanity in criminal cases, viz.: whether the man was laboring under such an hallucination that he was unconscious of the consequences of his acts.

A statutory enactment regarding the grades of insanity, which shall or shall not leave men accountable for their acts, as between man and man, and responsible for their acts to the community, would lead to a classification of insanity by its effects upon acts for purposes of the law, in addition to a medical classification by groups of symptoms for pathological investigation, and for curative purposes. The objection that would be raised by medical men is, that such classification would not be scientific, but that objection is just to this extent illogical, that it assumes that there is no scientific classification other than that which is adopted for medical scientific treatment. Jurisprudence is a science, having for its objects the preservation of society, the substantiation of human rights, the redress of wrongs, and the enforcement of the social law of *status*, and if, for its purposes, it adopts a classification based upon acts, instead of forms of disease, and groups together widely different and diverse objects, from the medical standpoint, it deals scientifically from a juridical point of view, quite as much so as when it deduces rights and remedies from the relation of husband and wife, and parent and child, without regard to the differences physiologically and psychologically, of the people of the community who enter into or find themselves in such relations. I have before observed that wherever a motive exists, however slight it might appear to the judge before whom the case is tried, or the jury who are to give a verdict, the law should act rigorously and inexorably. No uncontrollable frenzy causes people to dash out their brains, because of some slight self-reproach, by beating their heads against a stone wall, if they do not intend to commit suicide; and that arises simply from

the knowledge of all men, however rude their instincts, that natural inanimate objects pay no regard, in their effects, to the frame of mind in which the man may be. It is just the savagery which such mental conditions exemplify, that society has been striving for centuries to overcome, and members of society who are seized by such frenzies should be put out of it. It would be amazing to anyone were the history of some rude, savage people ever written, how innumerable the instances that we would then have recorded of desperate atrocities from what would seem to us very trivial causes by people who are not insane.

The classification upon the matter of accountability and responsibility would be about as follows: The first class should be composed of such persons who should be removed from trusts, and comprise all who suffer from idiosyncrasies so marked that they border upon insanity. Under the second class—persons who are not fully accountable—may be comprised those who suffer from melancholy, hysterics, incipient monomania, and all such as suffer from intermittent attacks of nervous diseases, also all epileptics and drunkards who, although they can frequently tell beforehand when they are liable to their fits of epilepsy or drunkenness, are nevertheless placed in frames of mind during their freedom from attacks which makes them in part non-accountable. As part of the interdiction to enter into contracts, there should be an absolute prohibition to those who suffer from hereditary or transmissible diseases to enter the marriage state. When we consider the vast misery inflicted upon subsequent generations, the deterioration of the race, and the lowering of its average of strength and wholesomeness by the adoption of the *laissez faire* principle upon that point by Government, very grave doubt may be entertained whether Government has not neglected an obvious duty in this regard, without a compensating advantage; and all of this class should be incapacitated from making executory contracts, except with the consent of a guardian—but all of this class should be held strictly responsible.

The third class would be comprised of such who suffer from insipient stages of softening of brain, lunacy, and monomania of a virulent type, also all cases of chronic, progressive and incurable intermittent nervous disorders. With the members of this class their whole accountability should cease, and their responsibility be limited to felonies only.

The fourth class includes idiots, incurable lunatics, those who suffer from dementia senilis, apoplectica, and dementia paralytica. In such cases both accountability and responsibility should be presumed to cease; a presumption rebuttable, however, in the case of felonies committed, by proof the making of a plan indicating calculation of probable events.

This classification, insufficient and tentative as it is, is nevertheless, to my mind, an indicator of the true method of the future progress of juridical reform in dealing with the question of accountability and responsibility.

SECOND INAUGURAL ADDRESS

OF

CLARK BELL, ESQ.*

Gentlemen of the Medico-Legal Society :

In assuming again the duties of the office of President of your Society, through your kind preference and partiality, I suppose you will not consider it amiss in me to call your attention to the labors of this body for the past year, as well as to look forward to the field which should be its mission in the coming one.

I take it, gentlemen, as a good omen, that we have received into our membership, for the year closing at the Annual Meeting, 148 new members, 102 of whom were chosen from the Bar of this city, and 46 from the medical profession. This is no small growth for so young a society, and one of which I think you may well and justly feel proud. I think I may fairly claim for this Society that it has not deteriorated nor gone backward in the year that has passed; but that, on the contrary, its increase in usefulness in the path and line of its mission, has kept step and pace with the increase of its members.

The discussions in this body have ranged over a wide field of subjects within the realm of medical jurisprudence, and the contributions made to the world through the medium of this society have not only enriched the current literature upon these topics, but have frequently been the theme of popular discussion by the public press—not alone of our own country, but of lands beyond the sea.

* Delivered November 26th, 1873.

It may not be improper on such an occasion as the present to call your attention to the radical change wrought in our criminal statutes, in relation to the trial of homicides and their punishment, mainly through the instrumentality of a very distinguished member of this society, Mr. Henry L. Clinton, which has passed into the settled law of the State, the progress of which you have watched, discussed and encouraged at your sessions, and the wisdom of which seems now generally conceded on all hands.

Your Society, gentlemen, has also been the means of awakening interest and discussion on the questions involved in investigating criminal trials where the defence of insanity is interposed.

You have seen and felt the great importance of this interesting subject, and noted the scandals that have been occasioned by their frequent improper interpretation, and the introduction of illegal evidence in important criminal cases, as well as the great public need of a thorough enlightenment of bench, bar and medical experts upon it; and I venture to say, that the discussion and action of your body in the controversies of the past year, and those that are now pending, have awakened a profound interest in the elucidation of questions so important to the proper and complete administration of justice in criminal courts, not confined to your body, but which the great mass of the thinking men of both professions are now considering.

It should, I think, be one of the objects of this Society to extend itself more and farther; and to foster and encourage a movement, which, under such auspices, cannot only unite the two professions of law and medicine in nearer and closer bonds, but can be useful in bringing into near and more intimate social relations in this great city two classes of men who, intent upon their several avocations, and proverbially the hardest worked of all others, can find in this society the means of pleasant, social intercourse, and of elevating and extending this important science into new fields with beneficent results.

It was decided, gentlemen, during the past year, to prepare for publication a collection of the various papers and contributions that had been made to this Society down to the close of the year 1872, and to include all that, in the judgment of the Executive Committee, were entitled to a place in such a work; which will be issued, bound in the usual style and form of a law volume, and will, as we believe, make a valuable contribution to the current literature of the world upon the subject of medical jurisprudence.

I have great pleasure in announcing that the publication of this volume is in progress, and that it will now shortly, as I trust, be issued under arrangements by which members of the Society will be entitled to receive it at the wholesale price from the publishers.

It is proposed to follow the publication of this work each year by a volume which shall embrace not only the transactions of this Society, but which shall also contain all the valuable contributions made to it during the year.

The management of the Society during the past season inaugurated an annual dinner, which was given with great success, as so many of you will remember who were present and participated in the festivities of that happy and jolly occasion. And I doubt not, it will hardly need a recommendation from me to induce you again the coming winter to renew, on a similar occasion, the friendly intercourse of the two professions around the festive board.

I shall not, gentlemen, on the present occasion, speak of those topics that have engrossed our attention in our public discussions, and which are still before us—at least to give my own views upon them, as I may have done on a former occasion, when first entering upon the duties incident to this chair—but I cannot consistently, with my views of my duty, forbear to call your attention to a subject in which I take a deep interest, feel a great pride, and which I think I may now say is destined to be prominently connected with the destiny and near future of this Society.

I allude to the subject of a Library of Medical Jurispru-

dence, founded here under the auspices of your Society, which shall be an honor and a credit to its founders through all time, and long after each and every of us have passed away.

I took the occasion to remark, when I accepted this chair last season, as follows :

"It has occurred to me that this society might lay the foundations the present season for one of the most complete libraries upon Medical Jurisprudence extant. The prominent law libraries of the city are singularly wanting in what may be said fairly to be necessary and accessible volumes on this subject. Exclusive of pamphlets, about one thousand volumes, as near as I am able to learn, are now published in this country and in Europe upon this interesting branch, and no gentlemen of either of the professions can well afford to give so much space upon his shelves for all these volumes, while those having our larger public libraries in charge seem not disposed to make this branch so complete and comprehensive as we should all wish to see.

"The moderate sum of two thousand five hundred dollars would probably establish such a library upon a firm, permanent and enduring basis, if a suitable location could be found for it; and I have no doubt the managers of the Mott Memorial Library would cheerfully furnish it a home.

"I shall esteem my connection with the management of your society peculiarly fortunate if it shall result in perfecting the initiatory steps for such a library, and I should feel great pleasure in co-operating with you in so laudable an undertaking. I have great confidence that success would certainly attend a well-directed and strongly urged effort on the part of this society for this object, if addressed to the foremost men of the two professions most interested in such a library, to raise a suitable amount to make its future certain and assured.

"Indeed, if the society should adopt a general resolve, by universal consent, to make it the duty of every member each year to contribute at least one volume to the library, of which

the society had not already a copy, it would be such a beginning as would certainly result, in the near future, in a library that would be the pride and boast, not alone of the society, but of the city of New York."

The society was so kind as to second and adopt those recommendations; and such a general resolution was unanimously adopted, making it the duty of every member of this society to contribute one bound volume upon medical jurisprudence each year to the society.

A committee, embracing some of your most honored and lustrous names, made a report recommending this project to your favorable notice, and dwelt upon its want and its importance; and the movement thus started has been, it may well be said, successfully inaugurated, and the future success of the library assured.

I append, herewith, the action of the society—the report of the Library Committee, and the names of the volumes already contributed to the library, and their donors, together with a complete list of the members of this society, and the papers contributed during the past year.

I have also started a subscription for this library, which I propose to call shortly to the attention of members, which will, I have little doubt, enable us to finish our work—considering how small a sum is needed to complete and enrich our collection with all works upon this subject now published.

I trust that every member of this Society, who has failed during the year that has just closed to comply with the terms of the resolution of the Society—to donate a bound volume each year—will at once make suitable amends, by making such a contribution both for the past and the ensuing year.

I shall not dismiss this subject without many thanks to the great liberality of some of the donors, for very valuable contributions indeed, nor fail thus publicly to thank Mr. David Dudley Field for a subscription of \$100 to the library fund; Mr. John H. Watson for a like subscription of \$50;

Messrs. Yeaman, Winterton Riddle, and Dr. J. E. Jamison of \$10 each, besides an annual subscription by our worthy Corresponding Member, E. S. F. Arnold, M. D., now of Newport, Rhode Island, of \$10 each year.

Thanking you, gentlemen, for the high honor of being again selected to preside over your deliberations, desiring for the Society a prolonged career of usefulness in the accomplishment of its high mission, I shall hope to receive that encouragement and aid from you all in the future which has rendered my past labors in this chair a delight and a pleasure.

MEDICAL JURISPRUDENCE OF THE STOKES CASE.*

BY EUGENE PEUGNET, M. D.

PART I.

HISTORY OF THE CASE OF JAMES FISK, JR.

THIS history is drawn up from the transcript of the notes of the court stenographer, and from the report of the inquest made by the coroner.

James Fisk, Jr., 37 years of age, in the prime of life, and of comparatively abstemious habits, received two pistol-shot wounds at about four o'clock on the afternoon of the 6th of January, 1872. The following is extracted from his *ante-mortem* statement: "I came through the outer door, and was going up-stairs, and had gone up about two steps, when looking up I saw Edward S. Stokes at the head of the stairs. As soon as I saw him I noticed he had something in his hand, and a second afterwards, I saw the flash, heard the report, and felt the ball enter my right side; a second shot was fired immediately afterward, which struck my left arm. When I received the first shot, I staggered and ran towards the door, but noticing a crowd in front, I ran back on the stairs again; was then assisted up-stairs and into this room."

4:20 P. M.—Dr. T. H. Tripler found him standing with his coat off. The Doctor first observed the wound in the left arm, but from his position thinking that there was something wrong, asked him if he was hurt anywhere else. He replied, "Yes," pointing to his abdomen. His pulse was

* Read December 26th, 1873.

Please paste in facing page 294.

ERRATA.

Insert "either" after "evidence is," 19th line, p. 164.

At p. 179, insert "SOLID PORTION" before last sentence on page.

"Expert," p. 184, should read "Exparte," 9th line.

"Period after services "As" should be the beginning of a new sentence. "As," and to 4th line, "the," should be connected with preceding sentence. P. 182, 2d line.

"Traits" for "notes," p. 200, 2d line from bottom.

Page 206, middle of page, after "1," should read, "The faculty of reason has been made subordinate to to the faculty of reverence."

75 instead of 45, 13th line, page 297.

The words, "The general appearance of the body was blanched," omitted after the word "marked," 6th line, p. 300.

Insert "in" before "Direct," 3d line from bottom, p. 302.

After "apparently" insert "deemed," 16th line, p. 304.

After "had they," 24th line, p. 304, insert "then."

"At a quarter of eleven another half a grain of the morphine administered hypodermically," omitted, should be inserted end of 2d line, p. 306.

Insert "dis" before "continue," 13th line, p. 306.

Change letter t to letter s, 9th line from top, p. 308. Should read "sighs."

Insert "no" before "evidence," p. 308, 11th line.

Insert "Clinical" before "History," p. 310, line 10.

Insert "curative" before "effort," p. 310, line 6 from bottom

Insert "not" before "Uraemia." p. 313, line 19.

"120," instead of "112," 10th line, p. 315.

Insert "20" instead of "30," 8th line from bottom, p. 316.

"20" instead of "18," 4th line, p. 318.

"Points raised by the," insert before "defense," 6th line from bottom, p. 321.

Insert "Charles" before "A. Leale," 24th line, p. 325.

Insert "exact" before "amount," p. 327, line 7.

then imperceptible, respiration estimated about 20, pupils of eyes dilated, the lids drooped over the globe, and there was a dark circle under the eyes. The Doctor rolled a bandage around the wounded arm, gave him two ounces of brandy, and led him to the bed, then proceeded to make an examination of the wound in the abdomen. It was situated about five (5) inches above the umbilicus (navel), and two inches to the right of the median line. The wound was circular, and about half an inch in diameter. On passing in a probe about three and a half ($3\frac{1}{2}$) inches, it was found that the wound had an oblique direction downwards, slightly backwards, and from right to left.

4:50.—Pulse, 76, weak and irregular; resp., 26 He recognized Dr. Fisher, who had just come in, and gave him his hand. Two ounces of brandy were administered by the mouth, and a cold compress applied to the abdominal wound.

5.—Said that "he felt more comfortable, but had some pain in the bowels."

5:15.—Pulse, 74; resp., 24, and more regular. More composed; complained of pain, and appeared to be restless. A few swallows of water were given to him. He was lying on his back, with the left arm resting on a pillow. Countenance agitated and pallid. Skin cool and moist. Pupils dilated.

5:45.—Pulse, 74; resp., 24. He was pale; skin cool, and covered with perspiration. Half a drachm of chloroform was then administered, as an anæsthetic, by inhalation, and at his own request. Whilst partially under the influence of it, Dr. James R. Wood carefully introduced a Nelaton probe about four (4) inches into the abdominal wound, but failed to find any evidence of the ball. Dr. J. P. P. White, before the withdrawal of the probe, felt a resisting substance, the tendon or muscular fibres of the rectus muscle. Dr. Fisher then examined, and also failed to find the ball. Dr. Wood found, after he came out from under the influence of the chloroform, that his pulse was more full than usual in cases of nervous shock. He was anxious, restless, and his eye

growing dim. His extremities were cold, the lower ones quite so. Two ounces more of brandy were then administered. Drs. Wood, White, Th. Steele, F. W. Fisher, and Tripler present.

6:45.—Appeared uneasy and complained of pain in his bowels. The extremities were cold, but hot flat-irons were applied to them, which he said "made him feel more comfortable." Drs. Fisher and Tripler in attendance.

7:10.—After having given directions for making his will, duly executed it.

7:30, or thereabouts —One quarter ($\frac{1}{4}$) of a grain of morphine in solution was administered by the mouth. Dr. Tripler.

7:45.—Pulse, 74; resp., 26. Complained of pain, and asked Dr. Fisher "If he had ever eaten green apples in the country?" Said "it felt like an old-fashioned country green-apple bellyache," and asked for a stronger dose of medicine, saying that "He was as strong as an ox, and that it required four times as much to affect him as any ordinary person, as he had found that last week he had to take a very strong dose of medicine to move his bowels." One quarter ($\frac{1}{4}$) of a grain more of morphine in solution was then administered to him by the mouth.

8:15.—Pulse, 72; resp., 30. Has been quiet at times, but mostly restless and uneasy. Complains of pain. Some eructation of wind, but no nausea. He said, "Give me more medicine;" and was then given ten (10) drops of Magendie's solution of morphine (equal to one half ($\frac{1}{2}$) of a grain of the salt*). Shortly after he said to Dr. Fisher: "Do you think that there is an even chance of my recovery?"

8:30.—Pulse, 73; resp., 35. Remarked that "he did not wish to be left alone." Asked for a drink of water, and it was given to him.

9.—Pulse, 73; resp., 35. "Complained of green-apple

* When Magendie's solution is dropped from a narrow-mouthed ounce vial, it will only *average* forty (40) drops to the drachm; therefore twenty (20) drops contain one (1) grain of the salt.

bellyache, and if he could only get rid of the pain he would be all right." Dr. Sayre says that "his pulse was good, steady, and regular, at 74 or 76. He was exceedingly pale, unusually white, but perfectly cool and collected in his mind. There was a paralysis of the entire surface of the body, the capillary circulation of the surface had stopped." Drs. L. A. Sayre, White, and Fisher present.

9:35.—Pulse, 72; resp., 32. His skin was warm and moist. Pupils *contracted*. Complaining of great pain in his bowels. Twenty (20) drops of Magendie's solution of morphine (equal to one (1) grain more of the salt) were then administered by the mouth. Drs. Fisher and Tripler.

9:45.—Pulse, 45; resp., 36. Was somewhat easier; at this time he was perfectly conscious and composed. He was given a few swallows of water; took it and drank it himself.

9:55.—Pulse, 80; resp., 34. Still complaining of gripping pains in the bowels. A hypodermic injection of fifteen (15) drops of Magendie's solution was then inserted under the skin of the left arm (equal to three-quarters ($\frac{3}{4}$) of a grain more of the sulphate of morphine). In a few minutes he asked for some water, and made some other casual remarks.

10:45.—"Still complaining of great pain and distress in the abdomen, and then asked for another injection of morphine." One more of 15 drops of Magendie's solution (equal to three-quarters of a grain) was inserted into the arm.

11.—Pulse, 90; resp., 32. Skin cool and moist. Dr. Wood says: "I found Mr. Fisk in a better condition than I expected to find him. *It was recommended that the treatment should be discontinued.* He conversed with me, and told me that he hoped everything would be done that could be; that he was worth saving. *He was more or less affected by the remedies that had been used.*" Dr. Steele: "I think in a measure he had rallied. The temperature of his skin was better. He was perfectly rational."—Dr. Tripler: "About 11 o'clock the pupils were slightly *contracted*, but sensible to light."—Dr. Fisher: "Was sleeping, but easily roused, and drank some water."—Dr. Sayre (at about half-past 11): "He was asleep,

quite profoundly asleep, but easily aroused." Dr. White was also present.

12 M.—Pulse, 100; resp., 26. Asleep, moved a little. Drs. Fisher and Tripler.

Jan. 7th, 1 A. M.—Pulse, 132; resp., 22. Patient awoke voluntarily and asked for a drink of water. Said that "he felt perfectly easy." His skin was warm. Pupils *contracted* and reacted to light. A cold compress was applied to the abdomen. Two ounces of brandy and water were given him.

1:30 —Sleeping quietly. Dr. Fisher alone.

2.—Pulse, 126; resp., 20. Whilst his face was being sponged off with water, he awoke and remarked that "He felt first rate." Two ounces of brandy and water were then given to him, and he soon fell asleep.

3.—Pulse, 124; resp., 22. Four ounces of urine drawn off with a catheter. Abdomen somewhat swollen. Two ounces of brandy and water were then given to him.

4:15.—Dr. White came in, and whilst conversing with Dr. Fisher, Mr. Fisk awoke. On inquiry he said that "*He felt easy, asked for a drink of water, took it in his right hand and drank it, raising his head somewhat, and fell asleep again.*"—Dr. White: "At four o'clock his *pupils* were pretty well *contracted*, but reacted by moving the candle. Pulse, 128; resp., 22."

5.—Was *sleeping soundly*. Dr. Fisher spoke to him, but he made no answer.

5:20.—Pulse, 135; resp., 20, and irregular. Dr. Fisher: "I spoke and *endeavored to arouse him, but was unsuccessful*. I rubbed his extremities with ammonia, and applied the same to the nostrils; it seemed to produce no effect. I endeavored to force his mouth open to give some brandy and water." But the Doctor did not succeed.

6:30.—Dr. Fisher: "Pulse, 130, and weak; resp., 20, and *rather easier*. *Still unconscious*. Pupils still sensible to light. I rubbed his arms and limbs with ammonia. *Could not arouse him.*"—Dr. Tripler: "I sponged his surface all over with aqua ammonia, also administered an injection of four

ounces of brandy and milk. At the same time applied mustard paste to the pit of the stomach and abdomen, and rubbed his feet with a similar paste."—Dr. Sayre: "At 6 or 7 o'clock, it was very early, I think about six o'clock. His pulse was very feeble, and more rapid; his respiration was very feeble; he was simply sinking and dying."—Question: Labored and stertorous breathing? Answer: No. His respiration at that time was, I think, about fourteen, *twelve or fourteen slower than it was* the evening previous; his pulse was much more rapid, I think over a hundred.

7.15.—Dr. Fisher: "Mrs. Fisk arrived and appealed to her husband for recognition. He was still unconscious and evidently sinking."

8.—Pulse, 130; resp., 18. Pupils *contracted* but sensible to light. A consultation was then held.—Dr. Wood: "I found Mr. Fisk *insensible and breathing heavily*, he was dying."—Dr. White: "About half-past eight he was gradually dying—perhaps that is a strong expression—he was *unconscious* and in a state of *coma*." Question: Was he *breathing heavily*? Answer: Yes, sir. Question: *Stertorous breathing*, as you call it? Answer: Yes, sir.—Dr. Steele: "I saw nothing to convince me but that the man would die." Question: What convinced you of that? Answer: *His labored respiration*, the peculiar pallor of the skin, and the *inability* of Dr. Sayre, with *his immense strength*, to *arouse him*. He could not be *aroused* by any *ordinary means*. Question: He was insensible to the touch? Answer: Yes, sir.

10.—Dr. Fisher: "Pulse, 130, and weaker; resp., 17, and irregular. *Still asleep*."

"From that time forward there was a gradual diminution of the regularity of the pulse and respiration until he ceased to live, at ten minutes to eleven." Question: When was it that the patient's *respiration became stertorous*? Answer: *A few hours previous* to his death. By the Court: About how long before his death? Answer: About *an hour and a half* or two hours before his death.

He died at fifty minutes past 10 A. M.

POST-MORTEM.—On the 7th of January, 1872, at No. 313 West 23d Street, at 9.15 P. M., assisted by Dr. E. G. Janeway, I made a post-mortem examination of the body of James Fisk, Jr. The post-mortem was made about ten hours and a half after death. The body was well nourished. Rigor mortis well marked. Post-mortem discoloration about neck and posterior surfaces of the body. The pupils of both eyes were normal. On the right side of the abdomen six (6) inches below the right nipple, and one and a half ($1\frac{1}{2}$) inches to the right of the median line of the body, six (6) inches above the umbilicus, and eleven (11) inches from the upper border of the sternum, was a wound, circular in appearance and half an inch in diameter.

There was a wound, oval in shape, half an inch in length by a quarter of an inch in width, on the anterior surface of the left arm, one inch above the bend of the elbow. A probe introduced into this wound passed upwards, backwards, and inwards through the tissues of the arm, and passing out of an opening on the posterior surface of the arm, five (5) inches above the olecranon process.

On introducing a probe into the abdominal wound a *quantity of gas emitting a faecal odor* escaped. An abdominal section being made, the wound was found to extend through the abdominal walls, passing obliquely downwards and to the left. The adipose tissue of the walls of the abdomen was two inches in thickness. Several small clots were found on the omentum. The *folds of the small intestines* were found *agglutinated* by recent *inflammatory exudation*. Ragged openings with bloody edges were found in the omentum, close to the attachment of the transverse colon, and in the *two knuckles of the upper portion of the ileum*. The *small intestines* were *empty*, the large contained faecal matter. A ragged opening was found in the mesentery and in the sigmoid flexure of the colon. An opening was found in the peritoneum at a point midway between the anterior superior spinous process of the ilium and the pubes below the muscular fascicule of the psoas magnus, and terminating three and

a half ($3\frac{1}{2}$) inches below the pubes in the thigh, close to the insertion of the psoas magnus, at which point a conical leaden bullet was found imbedded. It weighed two drachms and fifteen grains. There was half a pint of bloody fluid in the abdominal cavity. The kidneys and spleen were healthy. The liver was slightly fatty. The gall bladder contained a calculus the size of a hazel-nut. The *heart* weighed sixteen (16) ounces, *right side filled with coagula*, the *left side empty*. Structure of the walls of the heart was healthy, as were also its valves. Both lungs were free from disease.

Reflecting the scalp, it was found bloodless. Removing the calvarium, the brain was taken out and found to weigh fifty-eight (58) ounces; cerebrum, 51 ounces; cerebellum, 7 ounces, with pons varolii, which weighed one ounce. The *brain was healthy*.

Death, in our opinion, was due to shock and peritonitis from a pistol-shot wound in the abdomen.

There were present at the post-mortem examination: Drs. James R. Wood, Lewis A. Sayre, John Carnochan, Marion Sims, Charles Phelps, T. C. Finnell, F. W. Fisher, Alfred Beach, and others.

(Signed)

E. S. S. MARSH, M. D.

Sworn to, before me, this 8th }
day of January, 1872. }

Coroner.

Such is the history of the case as presented by the prosecution's own witnesses, collated from the above-mentioned sources, carefully excluding, when possible, mere expressions of opinion, which of course had no direct bearings on the facts of the case.

As the description of the abdominal wound, in the post-mortem report, is neither clear nor concise, I will state that, according to the collective sworn evidence, the bullet, on entering the abdominal cavity, caused the first perforation of the peritoneum; then passing through the omentum, causing four more perforations of the peritoneum; thence through

two knuckles (convolutions) of the ileum (small intestines), four more perforations of the peritoneum, and four of the small intestines; thence through the mesentery, two more peritoneal perforations; thence through the sigmoid flexure of the colon—whether it was the ascending or descending portion I know not—with two more perforations of the peritoneum, a final perforation of the latter on its pelvic reflection over the psoas magnus muscle. There were, therefore, four (4) holes or perforations of the small intestines, two (2) of the large, and fourteen (14) perforations or distinct wounds of the peritoneum. The missile then passed below the muscular fascicule of the psoas magnus, and following the course of that muscle over the arch of the pubes, without causing any injury whatsoever to the innominata or haunch-bone, lodged near the trochanter minor of the femur or thigh-bone.

PART II.

THE MEDICAL JURISPRUDENCE OF THE STOKES CASE.

Ex errore citius emergit veritas quam ex confusione.—*Bacon.*

The medical evidence in the repeated trials of this *cause célèbre* has given rise to so much comment, and there has been such a diversity of opinion in regard to it, that a critical analysis of its medical jurisprudence, as presented both by the prosecution and the defence, may render much that is apparently obscure clear, also further the interests of science, and in the future those of a proper administration of justice.

It is evident that the juries in the first and third trials were not directly influenced by the medical testimony—it is even doubtful if they took any notice of it. But, nevertheless, it may have had that direct influence, so frequently made use of by our most successful criminal lawyers, of diverting the attention from the merits of the case. In this

instance it may only have served as a wedge to cast a doubt in the minds of the jurors; for a wedge once well driven in will split the stoutest oak: *Cuneus cuneum trudit*. If the medical evidence failed to have any weight in the trials of this case, it was entirely due to the want of a proper appreciation of its strength on the part of the prosecution. This can only be explained either by a complete ignorance of the first principles of medical jurisprudence, or else by a most profound contempt for it.

Ever since the regular introduction of medical evidence in criminal trials, *coaching* has assumed a prominent position. In Europe—especially in France and Germany—this coaching, or medical prompting, is never neglected, and through it the science of medical jurisprudence has there attained a proud and enviable distinction. But in this country the neglect of it—rather than the want of a proper appreciation of its merits—has served to bring it, as well as medical expertism, into contempt. Our criminal annals overflow with such cases. Why, just think of it! We have had in the last few years, not even a decade, the Schoeppe-Steinecke, Wharton-Ketchum, Wharton-Vanness, Heggi-Seigfreid, Stokes-Fisk, and the remarkable *de lunatico-inquirendo* Train case, and sequence. In the first of these the Medico-Legal Society of the City of New York, whilst yet in its infancy, achieved an imperishable renown by obtaining a new trial for the accused, and preventing, in the words of the learned Justice who presided at the last trial, A LEGAL MURDER.

Any of these cases would have been suitable for my theme, but the Stokes-Fisk case probably affords the best and most varied illustration of it.

This case, either for the prosecution or the defence, thus presents two points for consideration: 1. As to the cause of death; and 2. As to the bearing the direction of the two wounds had on the relative positions of the aggressor and his victim at the time of the homicide.

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FIRST TRIAL.

ANALYSIS OF THE CASE FOR THE PROSECUTION.

The learned District Attorney, in calling on to the stand his legion of medical witnesses to prove the death of James Fisk, Jr., evidently relied on cumulative proof, but in this overreached the mark. Had he simply rested this part of his case with the evidence of the Deputy Coroner in reference to the autopsy, he would have evinced a sound knowledge of medical jurisprudence. For a careful examination of his case—which could and should have been made as clear to him by his coach as it is in the preceding part of this *brochure*—would have shown him that there were dangerous shoals on which, unless avoided by exclusion, he might run aground if not wreck himself. But no! There had been rumors as to the probable cause of death bruited about. It was apparently absolutely necessary to bring in overwhelming evidence, and in consequence thereof proved the theory of the defence.

The first witness was Dr. Wood. In his evidence, frankly yet cautiously given, the Doctor admitted the fact that the deceased was at one time under the influence of the narcotic. If the defence had then dared to exhibit their hand, he would have been compelled to make some damaging admissions as regards the clinical history of the case. Had they done so, the prosecution would probably have seen their aim, and endeavored to defeat it by exclusion.

The damaging admissions of Drs. White, Sayre, and Steele, compelled the prosecution to call Drs. Tripler and Fisher, with the minutes of the case, which only made matters worse.

According to the testimony of these gentlemen there were slight evidences of shock at twenty minutes past 4 P. M., an imperceptible pulse, a drooping of the upper eyelids, dilatation of the pupils, and a dark circle under the eye. The patient had not then found it necessary to lie down. At ten

minutes of five, pulse 76 and regular, resp. 24; took two ounces of brandy; at a quarter past five, pulse 74, resp. 24 regular, countenance pale and agitated, pupils dilated, skin cool and covered with perspiration. Dr. Wood found the pulse more full than usual in cases of nervous shock, the extremities cold, especially the lower ones, and the eyes were growing dim. At a quarter of seven, extremities still cold; at half-past seven, after the execution of his will, a quarter of a grain of morphine was administered by the mouth; at a quarter of eight, pulse 74, resp. 24, and complains of a green-apple bellyache, another quarter of a grain of morphine by the mouth; at a quarter past eight, pulse 72, resp. 30, quiet at times, but mostly restless—a third of a grain of morphine by the mouth; at nine, pulse 73, resp. 35, complained of green-apple bellyache. Dr. Sayre says: "His pulse was good, steady and regular, 74 or 76; he was exceedingly pale, unusually white, but perfectly cool and collected in his mind. There was a paralysis of the entire surface of the body, and the capillary circulation of the surface had stopped."

Up to this time there were *undoubted* evidences of *shock*, but no such symptoms as would indicate a *fatal termination*, save two of those described by Dr. Sayre, which even in themselves do not necessarily predicate a fatal result. Moreover, his evidence does not correspond with that of the other gentlemen, who were enabled to refresh their memory from the minutes, and it cannot be expected that a physician whose professional engagements are so extensive can carry every case in his mind.

All evidence of shock then terminated, and reaction clearly and unmistakably began to manifest itself. At twenty-five minutes of ten, pulse 72, resp. 32, *pupils* now *contracted*, skin *warm* and *moist*, and complained of pain in his bowels—two-thirds of a grain of morphine given by the mouth; at a quarter of ten, pulse 74, resp. 26, perfectly conscious, took some water and drank it unassisted; at five minutes of ten,

pulse 80, resp. 26, pain in bowels, and half a grain of the morphine administered hypodermically.

The physiological action of morphine on the respiration, as indicated by its corresponding ratio to the frequency of the pulse began to manifest itself at eleven. Up to ten the ratio had been from $3\frac{1}{12}$, $2\frac{1}{3}$, $2\frac{2}{5}$, $2\frac{3}{5}$, $2\frac{3}{5}$, $2\frac{1}{4}$, $2\frac{1}{8}$, to $2\frac{6}{17}$; at 11, $2\frac{2}{3}$; 12 M., $3\frac{1}{3}$; 1 A. M., $5\frac{6}{11}$; 2, $6\frac{3}{10}$; 3, $5\frac{2}{11}$; 4, $5\frac{4}{11}$; 5.20, $6\frac{3}{4}$; 6.30, $6\frac{1}{2}$; 8, $7\frac{2}{3}$; and at 10, $7\frac{1}{4}$. Its first physiological effect on the pupil was also observed at eleven o'clock in the evening.

At 11 P. M., pulse 90; resp. 32. Dr. Tripler says: "The pupils were slightly contracted, but sensible to light." Dr. Wood: "It was recommended that the treatment be continued. He was more or less *affected* by the *remedies* that had been *used*."

It is evident from the above, that the first decided narcotic effect observed was at 11 P. M. The rise in the pulse, from 74 at a quarter of ten, to 90 at 11, an increase of 16, shows that it was the morphine inserted in the arm which acted, and that the grain and a half administered between half-past seven and twenty-five minutes to ten, by the mouth, had no effect. This was owing to its non-absorption by endosmose.

At 12 M., pulse 100, resp. 26, he moved a little; at 4.15 A. M., pulse 128, resp. 22; *pupils* pretty well *contracted*, but reacted to the candle. Patient awakes spontaneously, takes a cup in his hand, raises his head somewhat, and *falls asleep again*.

Up to this time there were no evidences of pronounced narcotism. The physiological action of morphine on the pupil, which was first observed at eleven, was now more marked. The increasing ratio between the respiration and pulse, which had been steadily progressing, was at this time one in five and four-sixteenths.

From this time forward we have undoubted evidences of the *cumulative* action of the morphine, for it is evident that the grain and a half in the stomach had not been absorbed until after one or two o'clock, for the symptoms, which began

to make themselves manifest after five in the morning, would have declared themselves earlier. This absorption by endosmose could not take place until the equilibrium of the nerve-centres controlling the action of the stomach had been restored by complete reaction. Dr. Hammond, rebutting witness for the prosecution, recognized the possibility of the arrest of absorption in certain cases.

Thus at twenty minutes past five, with a respiration of nearly one to seven of the pulse, Dr. Fisher could not arouse him. This coma continued to increase progressively until eight. When the respiration was one to seven and two-ninths, the *pupils contracted*, but still reacted to light. The *respiration*, according to Dr. White, *stertorous*; and Dr. Steele says it was impossible for Dr. Sayre, with his immense strength, to arouse him. At 10, Dr. Fisher: pulse 130, resp. 17; a ratio of one of the latter to seven and eleven-seventeenths of the former. From this time forward there has a *gradual diminution* of the *regularity* of the *pulse* and *respiration*, until he ceased to live at ten minutes to 11. Moreover, according to Dr. Fisher, the stertor began to manifest itself a few hours before death.

It cannot be denied that the evidence of Drs. White, Steele, and Fisher, affords irrefragable proof of the most profound narcotism at 8 o'clock; whilst, according to Dr. Fisher, it was marked as early as twenty minutes past five, and kept on increasing without intermission until the fatal termination at ten minutes to eleven. This within twelve hours subsequent to the administration of the last dose of morphine, and sixteen hours after the first dose. The only symptom wanting is as regards the condition of the pupil between eight and ten minutes to eleven o'clock; whether it became perfectly contracted and insensible to light, or finally dilated, we know not, for there is *no legal record* of the *condition* of the *pupils* having been made after eight o'clock.

Most assuredly this evidence indicates death by *coma*, or death *beginning at the head*. For if the patient had died *instantaneously* from *shock* it would have been by

syncope, owing to the immediate *paralysis* of the *heart's* action; or if the fatal result proceeding from shock had been delayed several hours, and had been progressive or gradual, it would have been *death by asthenia*, or from a *progressive paralysis* of the *heart's* action; whilst the *stertorous* or labored *respiration* was *unequivocal*, and positive *proof* of the absolute *recovery* of the patient from *shock*. Moreover, in *shock*, before the inception of reaction, the *respiration* is even "*wanting the relief of sight*."

AUTOPSY.—According to the testimony of all the witnesses there was evidence of death either from shock or hæmorrhage; there were slight evidences of adhesive peritonitis, but not sufficient to cause death; whilst the right ventricle and auricle of the heart, that is, the *right heart* was *filled with coagula*, and the *left side empty*.

The condition of the heart militated against attributing death to shock. The lungs were reported healthy, and it is to be presumed that there was no evidence of hypostatic congestion, which, if it did exist, would have been of importance in connection with the state in which the heart was found. However, hypostatic congestion is not always made note of in post-mortem reports, as this condition in itself does not indicate *any lesion* of the *lungs*.

CASE FOR THE DEFENCE.

It was evident from the cross-examination of the witnesses for the prosecution, that the defence desired to establish the theory of opium-poisoning, and to prove that the patient did not die either from shock, peritonitis, or both combined. The prosecution, unwittingly, I presume, assisted them—for too much evidence is sometimes dangerous.

The defence having by their skilful cross-examination laid the groundwork of their case, it was only necessary for them to establish that: I. This wound was not inevitably fatal; II. The indications in favor of possible recovery, as shown by the antecedents, clinical history, and post-mortem of the de-

ceased; and III. To prove by experts that the cause of death was not from the immediate effects of the wound, but in consequence of the treatment thereof.

I. THAT THIS WOUND WAS NOT INEVITABLY FATAL.—Dr. Wood, in his direct examination, for there was no cross, said: "I felt that this wound was a dangerous wound, although patients do recover from an injury of the intestines, and there are some wonderful instances of this kind on record. I knew, and said, although he may be wounded in his intestines, yet patients do get well." When asked to predicate his opinion on the post-mortem, he said: "Well, sir, I felt that the wound in the intestines would produce death; still, as I have stated before, they do not always."

Dr. White, on his re-direct, when asked if he had known of a case in which the small intestines were shot through and through twice, and the large intestines once, answered: "No; let me explain, there is no means of *knowing* the *extent* of the *injury* after *recovery*." The Doctor then stated, in answer to further questions, that "there was a case reported by Inspector-General Taylor." Then, in the re-cross, counsel for the defence read several cases from the Surgeon-General's circular, No. 6, and asked the witness: "Would that be evidence that the smaller intestines would be wounded?" Answer: "Yes, I think so."

In consequence of this evidence, furnished by the prosecution, it was only necessary for the defence to call on Dr. Carnochan to corroborate it. The following question was then made: "Would you have thought that the case of Mr. Fisk was better or worse than the average, from the appearances after death and from what you saw of him during life?" Answer: "Well, there was nothing special to decrease the chances of his recovery, and there were some things favorable for his recovery. In the first place there was no extravasation of feculent material, and the extravasation of blood must have been very small. Those are the sources of death in the case where the ball entered the cavity of the abdomen. Patients die generally from extrava-

sation or from internal bleeding, if they recover from shock, and if they live long enough, from peritonitis ; those are the four sources of death."

The learned counsel for the prosecution endeavored to break down this forcible direct evidence by a severe cross-examination, but utterly failed as long as he based it on the merits of the case.

II. THE INDICATIONS IN FAVOR OF POSSIBLE RECOVERY, AS SHOWN BY THE ANTECEDENTS, HISTORY, AND POST-MORTEM OF THE DECEASED.—1. *The antecedents of the deceased*.—The robust health, vigor of the constitution, and comparatively abstemious habits, had been proved by the evidence of the prosecution ; but the defence, by their cross-examination, might have brought this out in bolder relief. 2. *The clinical history* of the prosecution showed that the patient had clearly and unmistakably recovered from shock and its effects. It also demonstrated that *during life* there was not the slightest reason, beyond the situation of the wound, to suspect that any of the *intestines* or *vicera* had been wounded. This was confirmed by the evidence of Dr. Carnochan for the defence. The expert evidence of Drs. Jacobi and McCready, for the defence, in answer to the hypothetical question, proved that: All evidences of shock had subsided, and that it was even doubtful if there were any present. 3. *The post-mortem of the deceased* indicated that there had not been any hæmorrhage, and no danger was to be apprehended from secondary hæmorrhage ; there had been no extravasation of feculent matter ; the small intestines were empty, whilst the danger of the escape of fæces from the large intestines was very remote. Moreover, the peritonitis was of the adhesive form ; it had agglutinated the small intestines, and was the effort of nature, and could, in all probability, have been controlled. Further, there was no foreign substance, such as cloth or wadding, or even a leaden ball, within the peritoneal cavity.

The defence did not enter as fully into this as they might have done. But they proved by Dr. Carnochan that : "He

(Fisk) was under circumstances that would have admitted of cure ; that is, there was no extravasation of feculent matter ; there was not peritonitis enough to kill him, and there was no internal hæmorrhage ;" so the *matter narrowed itself down to the effect of the wound*. "So far as the wound was concerned, there was a struggle between the amount of vitality that was in the man, and the treatment he received, and the other correlatives surrounding him."

III. TO PROVE BY EXPERTS THAT THE CAUSE OF DEATH WAS NOT FROM THE IMMEDIATE EFFECTS OF THE WOUND, BUT IN CONSEQUENCE OF THE TREATMENT THEREOF.—Had the defence carefully digested the clinical history so lucidly presented by the evidence for the prosecution, and which their coach had had ample time to collate, as described in the first chapter of this monograph, they would have drawn up a hypothetical question, first giving the essential facts up to the time of recovery from shock, including the treatment ; then from eleven o'clock in the evening until five the next morning ; again, from thence, until death closed the scene ; finally, the whole case, including the post-mortem appearances, which would have made out a much stronger case than that obtained by their exceedingly clumsy hypothetical question assuming the existence of certain facts that, in the majority of cases, will only serve to confuse the expert, compel him to ask for explanations, and finally give the cross-examiner an opportunity to practically nullify the influence of the direct examination on the minds of the jury. This is the great error frequently committed by counsel in the examination of experts. Almost regardless of what the answer may be, they draw up a question which they believe will influence the jury. This form may and does commonly apply to vulgar evidence, but in examining an expert the object should be to get a direct categorical answer, and thus produce the desired effect.

This is the question as given to Dr. Jacobi, the second medical witness of the defence : "A man in the prime of life, in unusual sound health, drinks moderately, receives a severe injury of a pistol-shot wound ; the first shock was noticed

about 4 o'clock in the afternoon; about half-past 4 the pulse was very low; at half-past 7 the pulse was 78, the respiration 24; his intelligence undisturbed, his answers prompt. Would you expect any further danger from shock?" Answer: "There is one question I did not understand: 'the pulse was low.' What does that mean?"

Question: "That means it was scarcely perceptible." Answer: "Was it quick or slow, and how long was it scarcely perceptible?"

Question: "There is no doubt but what he had a shock, but afterwards had recovered from the shock, and his pulse was 76, and the respiration 24." Answer: "Evidently that was no shock."

Question: "A reaction had occurred?" Answer: "You have not read any of the symptoms of shock as yet."

Question: "There is no doubt that after the injury there was shock; take that *as a basis*; his pulse was 76, respiration 24, his intelligence undisturbed, his answers prompt. Would you apprehend any further danger from shock?" Answer: "No, sir."

Question: "If, in such a case, at half-past 10 o'clock, or from 10 to half-past, the pulse and respiration were normal, his color simply pale, and at 11 P. M., reaction was further established, the condition of the patient has improved, and you find he becomes sleepy, but is rational, perfectly so, as long as he can be roused; that this sleepiness lapses into coma, with noisy respiration; the pulse runs up to 130, the respiration remains at 18, and in the morning from 8 o'clock till 10 and three-quarters he cannot be roused. What would you then suspect from that condition?" Answer: "One of two things, either morphine-poisoning or *death* from *uræmia*."

This naturally led to a long discussion, rather than an examination, as to *uræmia*, which is a poisoning of the blood due to a non-elimination of the urea from it by the kidneys. Finally, the discussion ended by the witness stating that the man died from opium-poisoning.

This examination gave an opportunity to the learned counsel for the prosecution to practically nullify the force of the direct evidence of the expert, although he failed in the attempt to break it down. For the answers were the only correct ones which an educated physician could make, who had no previous knowledge of the case.

This occurrence compelled the defence to call on Dr. McCready, which they should not have done, as he was obliged to admit that he had acted as their coach, and in consequence had a pronounced bias on the opium theory. The same question was given him, but leaving out "the pulse was low."

Dr. McCready qualified his answer: "*In a previously healthy man, I should have no doubt but that the man was laboring under the influence of narcotic poisoning.*"

Finally said: "From the hypothetical question, I have no doubt the cause of death was directly from the opium or the morphine. It was not shock, it was not peritonitis, it was uræmia. He being a *healthy man*, *uræmia* and *brain-disease* were *excluded*. It was *opium*, and *nothing else*."

This question had been previously given to Dr. Carnochan in a somewhat modified form, as it included his observations at the bedside and autopsy, therefore based on a previous knowledge of the case.

To the *first portion* of the *question* Dr. Carnochan answered in substance, that there was no further danger to be apprehended from shock. To the *second portion*: "Well, I should ask somewhat in regard to the treatment." This also led to a discussion, until the learned counsel finally framed the following *question*: "From the statement I have given you in regard to the quantity of opium used, and the form in which it was administered, his condition at the time you saw him, and his condition at the time of the examination, what is *your opinion* as to its effect upon the patient after you saw him?" Answer: "That amount of opium or morphine would tend to produce a narcotism. The *stertorous* breath-

ing can be *explained* by the *opium*, and it *required* something of that kind to *explain* the *stertorous* breathing."

As to the quantity of morphine administered.—The prosecution had shown that besides the first half ($\frac{1}{2}$) a grain of morphine administered in solution, there were ten (10) drops of Magendie's solution administered at one time, twenty (20) drops at another, then fifteen (15) drops, and finally another fifteen (15) drops, which would make sixty (60) drops. The defence endeavored to prove by the evidence of Dr. McCready that these sixty (60) drops represented ninety (90) minims or a drachm and a half, therefore three (3) grains of the morphine instead of two. The doctor testified that there were only forty (40) drops of the solution to the measured drachm. True! But as some pharmacists prepare Magendie's solution by weighing the distilled water as well as the morphine, which is the *only correct method*, whilst the majority prepare it by measurement, according to the rules laid down in the United States Pharmacopœia in the preparation of similar solutions—for this is not an officinal one—and is *manifestly unreliable*, as to carry out its requirements would necessitate an equable temperature of the graduated measure and of the distilled water, also an exact level, it may well be imagined what reliability can be placed on this method. This evidence is by itself *without value*, but would have been of *great importance* if they had *proved* by Mr. Farwell, the pharmacist, the method he had made use of in preparing the solution, and if done by measurement, whether the graduate had been tested, its temperature and that of the water noted, and was the level exact. Dr. McCready also testified that the drop is a variable quantity. There is no doubt about the accuracy of that evidence; but as Dr. Tripler and Mr. Farwell both testified that the solution was obtained in an ounce vial, either that one or another one like it should have been placed in evidence, as the drop varies with the length, thickness and diameter of the nozzle. This evidence was therefore worthless, because the defence failed to corroborate it by that of Mr. Farwell and of the vial. Yet the whole was of great

importance, for it would have conclusively established the fact that Fisk had actually taken, or been administered, three and a half ($3\frac{1}{2}$) grains of morphine, instead of two and a half ($2\frac{1}{2}$) or the equivalent of twenty-one (21) grains of opium instead of fifteen (15) grains, as sworn to by the witnesses for the prosecution. It is surprising that the defence should have overlooked this point, for it would have *determined beyond cavil* the fact of opium-poisoning, and would have had much more weight than *the reported bar-room conversation as to the administration of 110 or 112 minims of Magendie's solution*.

EVIDENCE IN REBUTTAL FOR THE PROSECUTION.

The defence having so well sustained their theory of recovery from shock, and death from opium-poisoning, it became absolutely necessary for the prosecution to rebut, but the preceding evidence, as well as that offered by the prosecution itself, rendered it somewhat more than a herculean task; and if the defence had displayed the same ability in cross-examining the witnesses in rebuttal that it did with the direct, it would have most effectually removed the last prop sustaining the elaborate medical structure of the prosecution.

The latter, alleging that it was their purpose "to show that the treatment was good," first placed Dr. Gurdon Buck on the stand. The District Attorney very skilfully examined this witness, and proved by him that opium was one of the primary indications in the treatment of severe gunshot wounds of this nature; and that the proportion of the dose, and the frequency of its administration, necessarily varied with the peculiarities of each individual case. The prosecution, however, committed a grave error in the opening of the examination, as follows:

Question: "In a case where a man is wounded by a pistol-ball passing into the abdomen, passing through and through two smaller intestines, through, into, and out again of the

large intestines, and then lodging in the neighborhood of the thigh-bone, would you consider it good treatment to give opium in case of great pain?" Answer: "Yes, sir."

Question: "Is it good treatment to give morphine in case of great pain?" Answer: "Yes, sir; *but rather as a palliative*. From the wound you describe, I should infer, almost necessarily, a fatal result, and the patient is entitled to all the relief that can be afforded from his sufferings during the time he survived."

This gave the defence a fine opportunity, in their cross-examination, to break down this evidence, but they failed to avail themselves of it. For there were *no means* by which the *exact nature* of this wound could be *determined during life*. If the clinical history of the case from twenty minutes past four o'clock in the afternoon, or from the receipt of the wound until eleven o'clock in the evening, had been given in the form of a *hypothetical question*, and the doctor asked: If he would then only have given morphine as a palliative, with a view to render the last moments easy? his *answer* would no doubt have been rather different. Then this:

Question: Would you give to a patient whose peculiar idiosyncracies were unknown to you, suffering from a penetrating gunshot wound of the abdomen, who, three hours after the receipt of this wound, say at "a quarter before seven, appeared to be uneasy and complained of pain in his bowels," at half-past seven one-quarter ($\frac{1}{4}$) of a grain of morphine by the mouth; at a quarter before eight, his pulse 74, respiration 26, still complaining of pain, another quarter ($\frac{1}{4}$) of a grain of morphine by the mouth; at a quarter past eight, "his pulse 72, respiration 30, has been quiet at times, but mostly restless and uneasy, pain persistent, 10 drops of Magendie's solution" (half ($\frac{1}{2}$) grain of the salt); at twenty-five minutes of ten, "pulse 72, respiration 32, skin warm and moist, pupils contracted, complaining of great pain in the bowels," 20 drops of Magendie's solution (one (1) grain of the salt) by the mouth; at five minutes before ten, "pulse 80, respiration 34, still complaining of pain," 15 drops of Magen-

die's solution (three-quarters ($\frac{3}{4}$) of a grain of the salt) by hypodermic injection ; at a quarter before eleven, still complaining of great pain and distress in the abdomen, then insert another 15 drops of the solution in the arm (three-quarters ($\frac{3}{4}$) of a grain of the salt), which would make in all (*according to the sworn evidence, but not in fact, for the exact amount was three and a half ($3\frac{1}{2}$) grains*), two and a half ($2\frac{1}{2}$) grains of morphine, in less than three hours and fifteen minutes, one grain and a half (*two grains in fact*) by the mouth, and the last grain (*one grain and a half*) by hypodermic injection? Answer : If in the affirmative.

Question : Is there not more or less shock in wounds of this kind, does it not temporarily paralyze the action of the stomach, and would this not interfere with the absorption of morphine? Answer : It might in a measure.

Question : Then is there not danger, when that quantity of morphine is administered at such short intervals, that the grain and a half in the stomach might not be absorbed until after the administration of the one grain injected under the arm, and before the physiological action of the latter had passed off, thus causing the *cumulative* action of the equivalent of 15 grains (*21 grains*) of opium? Answer : Possibly.

Question : If at 11 P. M. the patient's pulse was 90, respiration 32, was more or less affected by the remedies that had been used, his pupil contracted, but sensible to light ; at 12 M., pulse 100, respiration 26, asleep ; at 2 A. M., pulse 126, respiration 20, he awoke and remarked that "he felt first rate." Two ounces of brandy and water were given him, and he *soon fell asleep* ; at a quarter past 4, whilst a conversation was going on in the room, he awakes and says that "He felt easy, and asked for a drink of water, took it in his hand and drank it, raising his head somewhat, and fell asleep again." His *pupils* pretty well contracted, but reacted to a candle, his pulse 128, and respiration 22. Would it not be an indication of partial narcotism? Answer : Possibly it might be so.

Question : Now, sir ! if at 5 A. M. the patient was sleeping

soundly, and did not answer when spoken to ; at 20 minutes past 5, his pulse 135, respiration 20 and irregular, an effort was made to rouse him and failed ; at half-past 6, pulse 130 and weak, respiration 18, pupils still sensible to light, could not be aroused ; at 8, pulse 130, respiration 18, pupils contracted but sensible to light, unconscious in a state of coma, breathing heavily or stertorously, and could not be aroused by any ordinary means ; at 10, pulse 130, respiration 17, and from that time forward there was a gradual diminution in the regularity of the pulse and respiration, the latter labored or stertorous until he ceased to live at 10 minutes before 11 A. M.,—would that indicate death from *shock*, that is, death beginning at the heart either by syncope or asthenia? Answer : (It would be safe to assume that it would be an emphatic) No, sir.

Question : Would it indicate death beginning at the head or by coma? Answer : Yes, sir.

Question : Now, sir! taking the whole case into consideration, the fact that *no observation* was made as to the *condition* of the *pupils* after 8 o'clock, so that it is *not known* whether they became *firmly contracted* and insensible to light, or *finally dilated* ; and there were no evidences of uræmia or of disease of the brain, not forgetting the administration of two and a half grains (*three and a half*) of morphine in an interval of three hours and a half, what would, in your opinion, have caused the death by coma? Answer : The morphine or opium.

If this hypothetical question had been given to Drs. Carnochan and Jacobi it would have compelled them to answer categorically, and would have embraced the whole case presented by the witnesses for the prosecution ; thereby preventing a confusing cross-examination. Then it would, in the cross-examination of Drs. Buck and Hammond, have completely nullified the force of their direct evidence.

Dr. Hammond, in his direct evidence, cautiously given, said that " The proper treatment for wounds involving the intestines is to keep the bowels as quiet as possible, and that is

accomplished by administering large doses of opium." "I would give a sufficient quantity of opium in the first place to prevent any operation, any action of the bowels, and in the next to mitigate any pain that might be present, and also with a view to prevention of shock. I have given as much as three (3) grains of opium (*half of a grain of morphine*), every *two or three hours* in cases of wound and in cases of shock." "I think it would be safe to give as much as *ten* (10) *minims* of Magendie's solution (one-third of a grain of morphine), every *three or four hours*, or probably more if he were a strong man." "I could scarcely fix the limit, I would give enough to subdue the symptoms—as long as unconsciousness is not produced there is no danger."

Question: "Suppose the respiration kept at 16, 17, or 18?" Answer: "I have seen one case in which there was respiration to that extent, in opium-poisoning, in which the patient died, but I have not seen anything of the kind before or since."

"A very exceptional case."

It is evident that this testimony was rather in favor of the defence, and it is the strongest part of the Doctor's evidence. The remainder could have been completely nullified by critical cross-examination, as the direct in its questions presented the facts to suit its theory, and not as they appeared in evidence.

The defence began its cross-examination of the witness with its long hypothetical question, not making any allusion either to coma or stertorous breathing, and leaving the Doctor under the impression that the morphine had been entirely administered by hypodermic injection, which very naturally brought out the following *answer*: "Well, I think *he died of shock*, and my reasons for it are these: If he died of morphine, and I may state that is sufficient morphine to kill a man under some circumstances, and in an ordinary condition probably, he would have become unconscious very soon after the administration of the drug, and that unconsciousness would have gone on increasing, and he

would have died unconscious, his respiration would have become slow. The fact of his rousing six (6) hours after having taken the last dose of morphine is, to my mind, utterly incompatible with his having died of morphine."

This answer was necessarily fatal to the theory of the defence, and it became very important to neutralize and destroy its effect. For that purpose the defence floundered about, and taking as a basis the previously mentioned "bar-room conversation," propounded the following question: "Supposing he had received in the course of the night, between half-past 11 and 4 o'clock in the morning, one hundred and ten (110) minims of Magendie's solution hypodermically administered, together with one-third of a grain of morphine administered by the mouth." This amount was certainly sufficient to have killed. It was corrected by the Court's stating that "there was none taken afterwards" (after 11 p. m.). This gave the defence time to collect itself, and, falling back on Taylor's work on poisons, read the following extract as a question, "A man swallowed an ounce and a half of laudanum, in an hour and a half he laid down in bed, and some excitement was followed with numbness of the extremities; but he continued sensible and lively for seven hours and a half after, so that the medical man did not believe his statement, and it was not until eighteen hours that stupor commenced, and in two hours the symptoms of poisoning by opium were of an aggravated kind?"

Answer: "That is a different case entirely, the drug was taken into the stomach, and something might have interfered with the absorption of the drug, so that it did not get into the system, but here it is put under the skin, and gets into the system at once. I can well understand how a man taking a large quantity of laudanum on a full stomach, that the stomach might not absorb it, and it would be as much out of the system as if it were in a tin cup."

Here was the opportunity for the defence to correct its palpable error. 1. One grain and a half of morphine had been administered by the stomach; and 2, the shock by tem-

porarily paralyzing the action of the stomach had delayed the absorption of the drug until its final absorption caused the cumulative action of the whole amount administered. But it was not made use of, and some immaterial questions asked. This enabled the District Attorney in his re-direct to impress more fully on the minds of the jury the witness's answer to the elaborate hypothetical question of the defence; *ergo* the man *died of shock*, not of morphine.

Dr. Sayre was recalled in rebuttal; the most salient point of his evidence was brought out by the Court. Question: "You stated in your direct examination that the great sympathetic nerve had been injured by the ball?" Answer: "Yes, sir."

Question: "Did that have any effect upon the death?" Answer: "It would produce inevitable death pretty much in the manner of prostration that this did take place. The centre of the *sympathetic nerve* was injured, which was the cause of this great prostration."

This evidence was certainly damaging to the defence, at least might have been in the minds of the jurors; but it could have been effectually refuted by a skillful cross-examination compelling the witness to give direct answers, showing that the wound described was a hypothetical one, and that it was impossible for the solar plexus, which is the abdominal centre of the sympathetic, to have been wounded, as it is situated behind the stomach, whilst the bullet passed down towards the *anus*.

EVIDENCE AS TO THE PROBING.

It is not my purpose to discuss this question, for most of the defence was simply absurd. The direct evidence showed that the probe had not been introduced more than three and a half to four inches, whilst the oblique course of the wound and the thickness of the abdominal walls proved that it had not been carelessly done. Moreover, Dr. Carnochan, principal witness for the defence, admitted that "he would have

done it himself, and that if the probe did not penetrate into the cavity of the abdomen it could have done no harm."

As regards the use of a broken or partially disjoined probe, it was shown to have been broken subsequent to the death of the victim. The learned counsel no doubt thought that it might influence the jury, but that is not medical jurisprudence.

The learned counsel for the defence also "made much ado about nothing," as regards a caucus held by the doctors appearing for the prosecution, or, as he styled it, "Remarkable gatherings." Counsel who would go into a case without first ascertaining what his witnesses were going to testify to, would neglect his duty and the interests of his client. If the prosecution failed to do it in this case, or to take due advantage of it, they are responsible for a great oversight on their part.

The learned counsel for the prosecution, in his cross-examination of the witnesses, had at times a fine opportunity, but seemed to confine himself entirely to the effort to demonstrate to the jury that there was a personal feeling of one of the leading witnesses for the defence against one for the prosecution; also a spirit of antagonism and rivalry between the regular practitioners of medicine, or so-called allopaths—who are always called on in preference as experts in science—and the homœopaths; further, that one of the experts had received a fee, and that another expected one. As the law recognizes the right of an expert to a fee, this was uncalled for. Moreover, it was *not conducting the prosecution on the merits of the case, and was an evidence of weakness.*

In this country and in England license and custom permit counsel to conduct his examination in that manner. But this is not treating members of a kindred profession with the courtesy due them when called upon as experts. The defence might with equal propriety have endeavored to prove that the learned counsel assisted in conducting the prosecution through motives of personal malice towards the prisoner at the bar. For neither of these are pertinent to the merits of the case.

This practically closes the medical jurisprudence of the first trial. The second point, as to the bearing the direction of the two wounds had on the relative positions of the aggressor and his victim, was only brought prominently forward in the third trial, and I will therefore discuss it in connection with the evidence of that trial.

SECOND TRIAL.

The jury having disagreed in the first trial, a second one became necessary. The prosecution only called upon the deputy coroner to testify as to the post-mortem evidences. The defence admitted the killing, and relied exclusively on the theory of self-defence and justifiable homicide, which resulted in a conviction of murder in the first degree.

THIRD TRIAL.

The prosecution again called the deputy coroner to the stand. Had the report of the post-mortem been more lucid and exhaustive, even his evidence could have been dispensed with. In drawing up the report for a post-mortem examination in which there is even the faintest suspicion of a crime having been committed, not a single item should be omitted. For instance, in this one no mention is made as to the condition of the edges of the wound on the anterior surface of the arm, or those of the one on its posterior surface. There is only an opinion as to the points of entrance and exit of the ball expressed. This is not sufficient, for mere expression of opinion, unless called upon as an expert, is not evidence; and if the deputy coroner had simply described the exact condition of this wound, his report would have been of more value than any subsequent oral evidence. For an expert could then—by taking it into consideration with the deceased's ante-mortem; and the prisoner's own evidence, and if the coroner had conducted a more searching investigation as regards the topography of the stair-cases, the precise

point at which the ball was found, if there were any marks on the south-side wall, as to the holes in the cloak and clothing—have shown whether the prisoner's statement as to the position in which he alleged his victim's hands were in, was true or not. *This was the pivot upon which the case for the prosecution rested through three trials, and yet they failed to see it.*

This, however, is not the only error of omission: for the lateral and antero-posterior angles of direction of the ball through the abdomen are not stated; and this was of *vital importance*, for it would have shown the degree of elevation and obliquity at which Stokes stood as compared to the position of Fisk. The condition of the membranes covering the brain is overlooked. To say the brain is healthy only includes its meninges by implication, and the *law on questions of fact implies nothing*. Then to say the lungs were free from disease, does not imply absence of so-called hypostatic congestion. These errors of omission led one of the experts in the first trial to decline basing an opinion on that report. In the third trial it led to the defence's endeavoring to prove by two witnesses that there was a serious effusion in the brain and its meninges, which I do not believe they would have attempted if the report had been complete in all its details.

The defence called on Drs. McCready, W. H. Thompson, A. Leale, Carnochan, Shine, and Fisher. The latter gave the clinical history of the case, and in his cross-examination strongly defended the judiciousness of the treatment.

Dr. Carnochan's evidence was a repetition of his previous testimony, if anything more concise and to the point. The defence brought out what they considered an important fact; it was that "when the brain was weighed the towel in which it was placed became saturated with serum," that is, quite wet by the fluid exuding from the brain.

Dr. Shine corroborated this point of Dr. Carnochan's by stating that *he observed* "an effusion of serum beneath the meninges (or membranes) covering the brain."

Dr. McCready's evidence was substantially the same as on the first trial.

Dr. W. H. Thompson in his testimony substantiated the views of Drs. McCreedy and Carnochan as to recovery from shock, and death from opium-poisoning.

Dr. Chas. A. Leale was essentially called upon to demonstrate by his own experience, as well as by the Surgeon-General's report, that there were a number of remarkable cases of recovery from gunshot wounds of the abdomen, with lesions of the intestines.

The defence in this trial held the prosecution at great vantage. They could mould the evidence to suit their theory of opium-poisoning, and present the case in its most concise form; also compel, by exclusion, the prosecution to call on witnesses which would injure its side of the question, and sustain the theory of opium-poisoning.

The prosecution, in rebuttal, called on Drs. James R. Wood, Gurdon Buck, Alpheus B. Crosby, and Marsh.

The learned District Attorney committed a grave error by placing Dr. Wood on the stand; and if he had carefully read the evidence given on the first trial, he would have seen that the Doctor was a dangerous witness. For if, as before mentioned, the defence had dared to show their hand in the first trial, his evidence would have been just as strong in favor of the opium-poisoning theory as in this one. It was in this that the defence showed capital discrimination by compelling the prosecution either to practically admit the opium-poisoning theory or to refute it. For this it was absolutely necessary to call upon at least one of the physicians and surgeons who attended the deceased in his last illness.

Moreover, the Doctor was obliged to admit, "*that in view of our present knowledge and experience, the wound of the deceased could not be considered as necessarily unavoidably fatal.*"

Dr. Buck, in his direct examination, in answer to the hypothetical question, based on the post-mortem examination of the wound, stated that "it was inevitably fatal." The defence, in their searching cross-examination, neutralized the force of this assertion, and compelled the witness to admit, in answer to a hypothetical question, based on the prominent

symptoms during life, that the *shock* must have been *very slight* and that there were *symptoms of narcotic poisoning*.

Dr. Marsh was recalled to rebut the evidence of Drs. Carnochan and Shine, as to the existence of serus effusion in the meninges and ventricles of the brain. The Doctor asserted that there was none, but admitted, in his cross-examination, that he omitted to mention the condition of the meninges of the brain in his report of the post-mortem, and that Dr. Shine took down the notes at his dictation, but did not put down what he (Dr. Shine) might have seen. The existence of this effusion would certainly indicate a cerebral lesion, which, found to exist in a subject who had died with symptoms of narcotic intoxication, would give rise to a suspicion of opium-poisoning, but would not *per se* afford positive evidence. It would have to be confirmed by the proof of the administration of opium, or one of its salts, or by a chemical analysis. The defence, no doubt, introduced this testimony in this trial for fear that its non-existence would be cited as evidence of the absence of opium-poisoning. This question was raised by the evidence of Dr. Jacobi in the first trial, but is of no importance, as the weight of authorities agree in that it may or may not be present.

Dr. Crosby rather sustained Dr. Buck's views as to the fatal consequences of this wound, but admitted that as there were no evidences during life of its precise extent, that he would have carried out the treatment on the principles of possible recovery.

The evidence of this witness was chiefly remarkable by his having been called upon to prove Fisk's death from shock, by citing an analogous case occurring in his own practice.

In this case the victim received a penetrating gunshot wound in the abdomen, above the umbilicus and below the ensiform cartilage (terminal end of the breast bone). The Doctor saw him a few hours after the receipt of the injury, and found him suffering from shock. A quarter ($\frac{1}{4}$) of a grain of morphine was then administered by the mouth; in 4 hours, an eighth ($\frac{1}{8}$) of a grain; in 4 hours more, an eighth ($\frac{1}{8}$) of a

grain; in 8 hours, another eighth ($\frac{1}{8}$) of a grain; finally, in 8 hours, an eighth ($\frac{1}{8}$) of a grain; making in all, six-eighths ($\frac{3}{4}$) of a grain of morphine. The Doctor saw him a few hours after the administration of the last dose; the patient was then *insensible* and *breathing stertorously*. Narcotic poisoning was immediately suspected, and inquiry made as to the amount of morphine given. The stertorous breathing was then accounted for by one of the gentlemen present stating that the patient, when in health, usually snored. The victim gradually sank, dying forty-six hours subsequent to the receipt of the injury, and less than twelve hours after the administration of the last dose of morphine.

This was a most unfortunate case for the *prosecution* to advance in support of the view of death from shock *versus* that of opium-poisoning. For it fully sustained the latter theory: 1. The morphine had been carefully administered. 2. The shock and consequent paralysis of the stomach prevented the immediate or gradual absorption of the drug. It remained there *as much out of the system as if it were in a tin cup* until the reaction from shock permitted of its absorption *en masse* as if it had been administered in a single dose. 3. Its sudden absorption thus led to the cumulative action of the small amount of three-quarters ($\frac{3}{4}$) of a grain of morphine, the equivalent of four and a half ($4\frac{1}{2}$) grains of opium; and 4. The peculiar idiosyncrasy of the individual to a fatal result.

After the post-mortem, as nothing sufficient was found to account for death, as in Fisk's case, it was attributed to shock. This in face of the evidence of stertorous breathing, which cannot possibly occur coincidentally with shock. For stertorous respiration, as previously mentioned, is accompanied with deep and prolonged inspiratory efforts, and one of the first symptoms of absolute recovery from shock is a succession of deep inspirations.

Yet the *prosecution* would have us believe that this man died from shock, when he was, according to one of the gentlemen present, *snoring as if in a natural condition*. This is

simply going into the *reductio ad absurdum*, for this case fully sustains the theory of opium-poisoning in that of Fisk's. Like it, a *fatal result* was due to the *cumulative action of opium*.

It is worthy of remark, that in this extraordinary case the cumulative action of opium, which formed the basis of its medical jurisprudence, was never advanced by the defence as the cause of the toxic effect of the drug.

We will now pass to the consideration of the second point:

AS TO THE BEARING THE DIRECTION OF THE TWO WOUNDS HAD UPON THE RELATIVE POSITIONS OF THE AGGRESSOR AND HIS VICTIM.

In the first and second trials the only allusion made to this was by the prosecution, and it was more in reference to Fisk's throwing up his left arm, after the receipt of the abdominal wound, and receiving the second wound above the elbow. The defence did not even mention it.

The direction of the wound in the abdomen, or rather the course of the ball through the latter, from right to left, from above downwards and inwards, conclusively demonstrated that the deceased was standing on the south or left-hand side of the stairs, and Stokes on the north or right-hand side. This evidence was far more positive and reliable than Tommy Hart's, for it afforded undeniable, uncontrovertible proof of the relative positions of the assailant and of his victim. Moreover, it was of paramount importance to the defence, for it *sustained Stoke's evidence*.

The wound in the left arm was of great importance to the prosecution—one of its most reliable witnesses—and *its veracity was unquestionable*; but no direct expert evidence, save that of the District Attorney's, in the respective trials, was brought forward to explain it. According to the evidence of Dr. Marsh, the direction of the wound and course of the ball was as follows: The point of entrance, as shown by the in-

verted edges of the wound, was on the inner side of the left arm, one inch above the crease or bend of the elbow, then upwards, backwards and inwards, through the tissues of the arm, under the bone, then passing out of an opening, with everted edges, on the posterior surface of the arm, five inches above the olecranon process (tip of the elbow).

The direction of this wound shows that the arm must not only have been raised to an angle above the shoulder, but that the arm was thrown forward at a right angle with the body; yet according to the evidence of the deceased it may have been, and probably was, at an obtuse angle at the moment the ball entered the arm. This sustains the prisoner's statement as to his position relative to that of his victim, but it as effectually contradicts his assertion as to the position in which he alleges Fisk's hands were in holding a pistol.

The prisoner said that he had descended three or four steps on the south side of the staircase, when he suddenly saw Fisk coming up, in consequence of which he quickly sprang to the north side, resting his left hand on the banister, drew his pistol from the outside pocket of his overcoat, and fired two shots in rapid succession.

The deceased in his *ante-mortem*: "I came through the outer door and was going up-stairs, and *had gone up two steps*, when looking up I saw Stokes at the head of the stairs. As soon as I saw him I noticed he had something in his hand, and a second afterwards I saw the flash, heard the report, and felt the ball enter my right side. A second shot was fired immediately afterward, which struck my left arm. When I received *the first shot I staggered* and ran towards the door."

Fisk had on a military cape. The two holes on the left side, taken in connection with the wound in the arm, demonstrate that it fell over his arm; then this coupled with his *ante-mortem* statement: "*had gone up two steps*"—"and felt the ball enter my right side"—"*when I staggered*," proves beyond a doubt that his left hand, whilst in the act

of ascending the stairs, rested on the side rail, his arm thrown forwards, and when he received the first shot he staggered and was turning towards the door, which brought the arm to an obtuse angle with the body, and at one above the shoulder, as the second ball struck the arm. Moreover, the perforations in the front of left side of the cape, and the one in the back, prove this, which would have been further corroborated if the Coroner had taken evidence as to the precise place at which the bullet was found, and in case it struck the south-side wall, at what point. However, the angle of deflection and the relative position of Fisk and Stokes prove that the ball could not have struck the wall, as its velocity was spent after it had passed through the arm and cloak, and must have fallen at the foot of the stairs, on the south or left-hand side.*

There is therefore no doubt that if this evidence, which came as if it were from the grave, had been properly *considered* and *appreciated* by the *prosecution*, it would have gone further towards the conviction of the prisoner of murder in the first degree, than all the combined evidence of the boys Hart and Redmond ; for the proverb which the learned counsel, Mr. Tremain, applied with such telling force to Tommy Hart, *Falsus in unum, falsus in omnibus*, would have been applicable with even greater force to the would-be assassin Stokes ; for although it sustained his evidence as to their relative positions, it as effectually refuted it as to the position he alleged Fisk's hands were in holding a pistol.

That the defence fully appreciated the importance of this evidence was shown by the ability with which the learned

* Dr. R. W. Taylor informed me that I was mistaken on this point, as there was a mark on the south-side wall above the hand rail. I then examined it with him, in company with Mr. Crockett, and fully satisfied myself that it could not have been made by the bullet from Stokes's pistol, as it was within six steps from the upper landing ; and Fisk could not have been as high up, unless we reject his ante-mortem statement, also the evidence of Houseman, witness in the second trial, and that of Vinot for the prosecution in the third trial. Moreover, Mr. Powers states that it existed previous to the homicide.

counsel, Mr. Brainerd, in the third trial, made use of the prosecution's own model of the staircase, and of its rebutting witness, Dr. Wood, to prove that the direction of the wound in the abdomen clearly demonstrated that the relative positions of Fisk and Stokes were not as sworn to by Hart, but as sworn to by the prisoner. No allusion was made to the wound in the arm by the defence; they apparently avoided it, *no doubt for reasons best known to themselves.*

The perforations on the right-hand side of the cape showed that the right forearm of the deceased was slightly flexed on the arm, and that the hand rested on the abdomen, below the navel and above the pubis.

The prosecution apparently attached much importance to placing in evidence, towards the close of the last trial, the cloak and wearing apparel of the deceased, and consequently had it donned by an officer of the Court, notwithstanding the strenuous objections of the defence. The latter might have spared themselves the trouble, for by being placed in evidence at this late hour, without the corroborative evidence of the course of the two balls through the body, it had simply degenerated into a harmless public exhibition. Moreover, its value as evidence was impaired by the Coroner's neglect in not taking charge of it at the ante-mortem. The prosecution had conclusively demonstrated the want of a proper appreciation, if not complete ignorance, of the first principles of medical jurisprudence, by not presenting it either in their direct evidence or in their rebuttal, in connection with the wounds and the position of Stokes and Fisk on the stairs. It is possible, however, that they may have considered the more than doubtful testimony of Tommy Hart, more reliable than this undeniable, irrefutable evidence.

EMOTIONAL INSANITY.

On this point there was no medical evidence offered in any of the trials, and the learned counsel for the defence showed their appreciation of the strength of their case by not calling

in any to substantiate it. But profound admiration for the manner in which they introduced evidence bearing on that point, compels me to notice it.

This defence, owing to the exclusion of evidence in the two preceding trials, which was admitted in this one, in virtue of the decision of the Court of Appeals, was only brought forward in the last trial. It was first shown that there had been insanity in the prisoner's family, then evidences of Fisk's threats against the prisoner, and, finally, the constant apprehension of the latter lest the former's emissaries should compass his death, were skilfully brought out, and establishing a peculiar emotional condition which might at any moment explode; this by unimpeachable witnesses, and who had no special regard for Stokes. Moreover, the prosecution brought this mental condition down to the very day of the shooting—to within a few minutes previous to the homicide, by introducing his honor Recorder Hackett, as an expert *post hac vice*, who stated that he saw Stokes standing in front of the Grand Central Hotel, "as if anticipating; his face was excited." It is evident that the learned counsel merely looked upon this issue as one of the many straws counsel make use of to influence a jury.

CONCLUSIONS.

The medical jurisprudence of the Stokes case thus proves that :

1. The shooting of Fisk was not done in self-defence, but with premeditation; and
2. The wound in the abdomen was not necessarily fatal, and that the morphine was the immediate cause of death.

These thus proved an attempt to commit murder in the first degree.

The learned Judge Davis, who presided at the last trial, fully appreciated this, and with his usual discrimination and perspicacity on questions involving principles of law, thus

expressed it in a most lucid manner to the jury, in the following extract from his charge :

"The exact point I submit to you is this: If morphine, improperly administered, either as to the manner or as to quantity, caused the death of James Fisk, Jr., on the seventh of January, not as an accelerating cause, *but an independent cause, being in itself the sole agent producing death at that time, then the prisoner is not chargeable with the death, because another and an independent agent produced that result in which his act—the wound he caused—did not occur.* But if you should come to the conclusion that the deceased died solely from the effects of morphine administered, *it by no means follows that the prisoner in this case is not to be convicted.* An independent agency stepping in to cause death independently of the wound, simply arrests a crime before its complete consummation. As, for instance, in the North Carolina case, where C came in and by a murderous blow killed the party instantly, the act of A, who had intended to kill him, and had inflicted a fatal wound with that intent, failed to ripen into murder, because an independent act took from his act the result that would follow. Therefore, in this case, assuming that you find he inflicted the wound with the premeditated design to cause death, he is liable to be convicted of the crime of *an attempt to commit murder in the first degree.*"

The above are *post hoc* conclusions on a *res adjudicata*, and therefore of but little practical value as applied to the merits of this case. Moreover, it would indeed be an instance of a *mons parturiens*, were not all the points in the whole case pregnant with importance as regards the urgency of a change—

I. In the manner of conducting *ante-* and *post-mortem* inquests by the coroners; and

II. A modification in the introduction of expert testimony into criminal trials.

For all the cases referred to in the opening afford a striking illustration of similar points.

THE WRIT DE VENTRE INSPICIENDO.*

(INSPECTION OF THE ABDOMEN.)

BY WM. HENRY ARNOUX, ESQ.

HAVING occasion recently in an interesting case, where the disposition of a considerable share of a large property depended upon the fact of the pregnancy of the wife of the deceased, to examine the origin and history of the writ *de ventre inspiciendo*, and to prepare a brief upon the same, we have been led to think the topic an appropriate and useful one for discussion before this Society.

In the month of September, 1873, there died in the city of New York a citizen of German birth who exemplified in a striking degree the elevating influence of American institutions upon those who, possessed of talent and industry, yet without friends or fortune, would be unable to rise in their native land. Frederick Rollwagen, who came to this country at the age of twenty-one, penniless, and unable to read or write, by his own exertions had, at the time of his death, amassed a fortune of upwards of half a million of dollars, although he never could write anything but his own name, nor could he read manuscript; so that, for the transaction of all business affairs that required written instruments, he was compelled to rely upon the integrity of those who surrounded him.

This unlettered millionaire left, him surviving, a widow to whom he had been married some three years before his decease, by whom he had no children born in his lifetime; the

* Read January 22th, 1874.

children of a deceased daughter, and three sons the issue of a first marriage. In June, 1873, he duly executed his last will and testament, and, in September following, he executed a codicil thereto, wherein he made especial provision for any child or children that he might have thereafter.

Shortly after his death Malcolm Campbell, Esq., of the New York Bar, was appointed guardian of one of the grandchildren, and thereupon he brought suit against the widow and other heirs of the deceased, to have the will and codicil set aside, and the land of which the testator died seized partitioned in the same manner in which it would have been divided if Mr. Rollwagen had died intestate. In conjunction with the service of the papers commencing the suit, he served a petition, wherein he stated that since the decease of her husband the widow gave forth that she was pregnant; that such was the physical condition of the deceased, by reason of paralysis and age, he then having been upwards of sixty-five years, and the age of the widow herself, she then being upwards of forty-eight years, and having been a single woman until she was forty-five, and that they were severally incapable of producing offspring, and that such allegation of pregnancy on the part of the widow was fraudulently made for the purpose of depriving the rightful heirs of their just share of their inheritance; wherefore the petitioner prayed that the Court would issue the common law writ *de ventre inspiciendo* for the purpose of determining the facts of the case.

We were retained on behalf of the widow to defend her right in the action, and to resist the prayer of the petition. As the application was novel and of great practical importance, it became necessary, in the first place, to ascertain what the writ was; and in the second place, to what uses it had been put. Becoming interested in the prosecution of our studies we endeavored to present to the Court upon the argument of the petition a chronological synopsis of the adjudications so far as they were reported in all the reports to which we had access, and we herewith present the same. First:

THE WRIT.

The writ itself only appears in Bracton and the Register in the monkish Law Latin inherited by the earlier practitioners of England from the middle ages. The *Registrum Brevium* was a collection of writs made by some unknown hand, probably some clerk in the Court of Chancery, and it is the oldest law book extant. In it the writ is given, preceded by a note, as follows (Regist. 227):

"If any one having an heir marries and afterwards dies without issue of his own body, whereby the inheritance ought to descend to the brother of the deceased, and the wife allege that she is pregnant of the deceased, when she is not, the brother and his heirs may have a writ *de ventre inspiciendo* as appears by the following writ:

"THE KING TO THE SHERIFF, GREETING:

"A has shown to us that although R, who was the wife of Clement, is not pregnant, she falsely says that she is pregnant by said Clement, to the intent of depriving said A of the inheritance, since the land which belonged to the said C ought to descend to said A as brother and heir of said C, if the aforesaid R had no issue by him. And because we desire to prevent so great a wrong if it is done intentionally, we command you that, having taken with you twelve chosen and trusty knights and twelve chosen and discreet matrons from your county, you go in your own person to the aforesaid R, and, in the presence of the aforesaid knights, cause her to be inspected, and by said matrons to be examined in regard to her breasts and womb in every way that will better enable you to certify whether she is pregnant or not.

"And if the said matrons shall find the said R pregnant, then make diligent inquiry of them as to the time when they think she will be delivered, and transmit the result of the examination that you shall then make to our Justices at the first Assize, etc., or to our Justices at Westminster, clearly and distinctly by letters under your seal, and by two of the knights that were present at such examination, to the end

that, the truth being known, we may cause justice to be done, and append then to this writ the names of the knights and matrons."

The form in Bracton of this writ somewhat varies from the above taken from the Register, and he gives the subsequent writs to be issued on the return of the first writ. The writs as given by him are as follows:

(TRANSLATION FROM BRACTON.)

I.

The writ to the Sheriff to examine a woman who feigns to be pregnant during her husband's life:

"THE KING TO THE SHERIFF, GREETING :

"We command you that, all business and delay being laid aside, you summon before yourself and a jury, in your County Court (or before such-and-such a man, whom we have appointed our Judge for this occasion), A, who is the wife of B, who gives out that she is pregnant; and in the presence of the aforesaid jury, have her viewed by lawful and discreet matrons, so that the truth may be the better known; and have her carefully examined by the aforesaid matrons about the breasts and the belly, and in every way that may show more certainly whether she be pregnant or not. And if the aforesaid jury and matrons find that she is pregnant, or are in doubt, then have her placed in some castle of ours, and guarded in such way that no female who is pregnant shall go near her, nor any one else from whose presence any suspicion of fraudulent practice may arise, and let her tarry in that castle until she is delivered of her child.

"See to it, too, that she be so closely guarded in that castle that no fraud can occur in regard to her child while she is in custody, for we have commanded the keeper of the castle that he receive her in the aforesaid castle," etc.

II.

Writ to the Castellan :

“THE KING TO THE CASTELLAN, GREETING :

“We command you that you receive in your castle such-and-such a woman when she comes to you, and let her stay there, in a manner fitting her station in life. And if two or three women wish to see her every day about her child, once every day, let them do so. Witness,” etc.

III.

Writ on the complaint of the husband's heir :

“THE KING TO THE SHERIFF, GREETING :

“A, the brother of B, has shown to us that although such-and-such a woman, who was the wife of the said B, is not pregnant, she falsely says that she is pregnant by the aforesaid B, and thus deprives A of his heritage in the land which belonged to B, and which, as he says, ought to descend by the right of inheritance to A as the brother and heir of B if the aforesaid woman had no issue by him. And since we wish to thwart such deliberate villainy, we command you that, having taken with you chosen and lawful knights and matrons from your county, you personally go to the woman, and, in presence of the aforesaid knights, have her viewed by the matrons, and carefully examined about her breasts and her belly in every way so as to make certain of her true condition. And if they find her pregnant, let them carefully inquire in every way about the time of her conception, when and where, and when she thinks she will be delivered; and communicate to our Justices at Westminster the result of the examination that you then and there make, distinctly and at large, by letters under your seal and by knights chosen from those who were present at the examination; and, the truth being known, let justice be done. And meantime, let the

aforesaid woman be safely guarded in some castle or somewhere else in a safe place, so as to avoid all suspicion of her having practiced any fraud, until the time of her delivery; and have there this writ and the names of the knights and matrons with whom you made the examination.

“Witness,” etc.

IV.

Writ to bring the woman before the Justices at Westminster :

“THE KING TO THE SHERIFF, GREETING :

“We command you that, all excuse being laid aside, you have before our Justices at Westminster, on such-and-such a day, the body of A, who was wife of B, by whom she says she is pregnant, though she is not, that she may there answer C why she falsely gives out that she is pregnant when she is not, to the end of depriving C of his just inheritance. Witness,” etc.

Blackstone says : “The rigor of the Gothic constitutions esteemed an attempt by a widow to feign herself with child in order to produce a supposititious heir to the estate equivalent to the most atrocious theft, and therefore punished with death.” (1 Blackstone Com. 456.)

This writ originated with the civil law, and appears to have been introduced into England prior to the reign of King Edward I (3 Hays Juris. Exr., 413). It belonged to the common law writ that issued out of the Court of Chancery, and was a writ of right (1 Maddock’s Chancery, 9 ; ex-parte Aiscough, 2 P. Wm., 591) provided by law, not merely in the case specified in the Register, but also for the benefit and safety of all right heirs *contra partus suppositos*, as Coke expresses it (1 Coke Litt. by Thomas, 165 ; 8b.) ; for a devisee (Atty Gen. v. La Roche, cited ; 2 P. Wm., 591) whether for life, or in tail, or in fee (Ex-parte Bateman) ; for a purchaser

(Ex-parte Wallup, 2 Dickens, 767); and for any one who had a present interest in the decedent's estate, however minute or remote (Allen v. Allen, 15 Ves., 136); and in respect to personal as well as real property (Harge n. 3, 8b, 44); but the heir apparent could not have the writ in the lifetime of his ancestor; as for that purpose the petitioner must be *verus hæres*; therefore, if the ancestor were in a fever or a delirium, from which recovery was impossible, and he made no will, still the law would look upon the petitioner as mere heir apparent, having nothing but an expectation, which is different from an expectancy in a legal sense, and as having no interest whatever on that ground (Per. Ld. C. J. De Gray, cited by L. Eldon; Lord Dursley v. Fitzhardinge, 6 Vesey, 260). Notice of the application for the writ was required to be given to the widow, and the writ when issued could be directed to the sheriff of any county, (Ex-parte Wallup, 2 Dickens, 767).

As has already been shown, although the whole proceeding bears the name of the writ *de ventre inspiciendo*, that writ was only the initial proceeding, and if the representations made by the widow were proven to be true, then the other writs followed as a matter of course. The first writ was returnable to the Court of Common Pleas; the second writ, directing the Sheriff to remove her to a castle, where he was to safely keep her until she was delivered, issued out of the Court of Common Pleas (Willoughby's Case, Cr. Eliz., 566; exparte Aiscough; 2 P. Wm., 591). The provision in the writ that the Sheriff should not permit any pregnant woman to visit the widow was undoubtedly made to guard against two contingencies—one, that a fraud might be perpetrated in case of any accident to the child *in ventre sa mere*; the other, which was probably more feared, that the heir might be a female child, and a substitution made of a male child, to take the inheritance under the English laws of primogeniture.

This writ has been vigorously denounced as "an ancient and barbarous writ," one that, "if strictly executed, would be an intolerable grievance," an "old and disgustingly inde-

cent writ," and these denunciations have been most emphatic from the medical profession [16 Lord, *Med. Gazette*, 697].

It is not, therefore, surprising that there is no case on record wherein the writ has issued in all the barbarism of the course and practice of the common law, although it may have been in two cases, which will be hereafter cited, of which the reports do not contain sufficient to enable us to speak positively; but the endeavor of both courts and counsel ever has been to soften its rigors, and to clothe its deformity.

The fact that the writ appears in the Register is not conclusive evidence that it has ever been issued, for Mr. O'Connor recently informed us that he had found in that volume a writ—issued on the petition of a wife, commanding her husband to appear at the next Term of the Court of Chancery to answer to her charge of assault, and in the meantime enjoining him to refrain from all personal chastisement of his wife, *except* such moderate chastisement as the common law permits—that he had thought to be so preposterous, in view of the manners and customs of that age and of the terms of the writ itself, that he sent to England, and had a search made through the records of the Court of Chancery to the earliest date of its existence, and that no single instance of the issuing of such a writ could be found; and he was therefore forced to the conclusion that the form emanated from the brain of some witty clerk, who was unwilling that any high-born dame who came complaining to him of her husband's cruelty, should find the law insufficient to meet her case, and at the same time she would refuse to accept a writ that, by implication, gave her husband "license to lick her" as he desired, provided he did not lay it on too hard. No one has instituted a similar search in respect to this writ, so far as the reported cases show, and it may be possible that its barbarity was likewise only the words of an irresponsible clerk.

THE USES OF THE WRIT.

The earliest reported case appears in the Black Letter

Folio Report of Moore, in the barbarous Norman French in which the ancient law reports were published ; and also in Cooke's Elizabeth.

Before the thirty-ninth year of the reign of Queen Elizabeth, Sir Francis Willoughby died seized of a great inheritance, leaving no son, a widow and five daughters, whereof the eldest was married to Percival Willoughby. At the time of his death the widow represented [pretended, in report] herself to be with child by Sir Francis, which, if it were a son, would deprive his sisters of their inheritance. Willoughby and wife thereupon prayed for this writ, which was duly issued : whereupon the Sheriff accordingly caused her to be searched, and returned that she was twenty weeks gone with child, and that within twenty weeks *fuit paritura* ; whereupon another writ issued out of the Common Pleas, commanding the Sheriff to keep her in such a house, and that the doors should be well guarded ; and that every day he should cause her to be viewed by some of the women named in the writ (wherein ten were named), and when she should be delivered that some of them should be with her to view the birth, whether it be male or female, to the intent that there should not be any falsity. And upon this writ the Sheriff returned that accordingly he had caused her to be kept, etc., and that on such a day she was delivered of a daughter.

The next case was in 1623, and was as follows (2 Cro. Jac., 686). William Theaker died on the 15th day of February, without issue born at the time of his decease, leaving his cousin Alphonsus Theaker, his heir-at-law, and also leaving him surviving, his widow, Mary, who was supposed to be *enciente* by him, and who was married again, to one John Duncomb, within a week after the death of her husband. Alphonsus Theaker thereupon procured, out of Chancery, a writ directed to the Sheriff of London, to cause the said Mary to be searched whether she were with child by the said William Theaker *et quando fuit paritura* (no mention being made of her second marriage); and this writ was according to the precedent of the case in Cro. Eliz. of the like writ against Lady

Willoughby. The Sheriff returned the inquisition that, by such persons, he caused her to be searched, and found her to be *enciente et quod fuit paritura* within twenty weeks.

Wherefore he now prayed a second writ to be directed to the Sheriff of Surrey, because she was removed, with her husband, to that county, that the Sheriff might take her into custody and keep her until she were delivered of her child, that there might not appear to be any false or supposititious birth; and that in the interim he should cause her to be viewed every day by certain matrons, named by the Court in the writ, and that some of them should be at the birth of the child, according to the said precedent of Lady Willoughby's case. But, because in that case the lady was a widow and so such a course might well be observed, but here she is a *femme covert*, who ought to cohabit with her husband, they would not take such a course with her, but left her with her husband. He entered into a recognizance that she should not remove from the house wherein they then inhabited, and that one or two of the women returned by the Sheriff should see her every day, and that two or three of them should be present at her travail; for it was said that this issue might well be said to be the child of her first husband and should inherit his land, so as if there were any false or supposititious heir, the cousin and heir might be disinherited.

Wherefore a writ was accordingly awarded to the Sheriff of Surrey, to cause her to be seen, every day until her delivery, by two at least of said women returned by him, and that three of them, or more, should be at her birth.

This writ appears to have remained in abeyance from that time until about 1725, when the case of the Attorney General v. La Roche came before the Court. (Not reported, cited 2 P. Wms. 591.)

A testator devised an estate to A, with remainder to A's children, and in default of such issue an ultimate remainder to a charity. A married a woman of ill-fame, and dying soon after, his wife pretended to be with child, whereupon the Attorney General, to protect the charity, filed this bill in equity,

and the Master of Rolls decreed that two midwives should resort to the widow, search her and see whether she was with child or no, and attend at the birth.

The widow, perceiving that the matter would be discovered, voluntarily declared that she was not with child. This case is interesting as presenting the only instance of proceeding by bill instead of petition, and as being the only instance wherein an attempted fraud has been frustrated by this writ.

The next case was *Ex-parte Aiscougher* (1 Mosely, 391) or *Aiscough* (2 Peere Wms., 591) in 1631, where a petition was presented to Lord Chancellor King, setting forth that Sir John Chaplyn, or Chaplin, Baronet, a young gentleman of the age of nineteen, seized of a great real estate in Lincolnshire, was drawn in by one Morris, a bailiff, to marry his daughter, about sixteen years old; had made a will giving his personal estate to his wife, and had died within two months after the marriage, leaving three sisters who were his heirs at law in default of issue, and who filed the petition. Therein they prayed that whereas the widow was now at her late husband's seat in Lincolnshire, this might be as her castle as laid down in Coke's Institute, wherein she should be confined and continue until the time of her delivery, and that some woman might be always resident with her both before and at the birth.

The Chancellor held that as the condition of the woman was admitted, the Court would fix a place agreeable to both parties where she should be till delivered, and where the heir might from time to time, at proper seasons, and on notice, send women to see her and to be present when the child was born, and that there was no need to execute the writ in a strict manner.

In a rare volume of law reports (Cooke's Reports, 81) containing cases in the Common Pleas, it appears that the writ was returned that the lady was with child, and a motion was made for her safe custody, and it being suggested that the lady's mother was likewise with child, and therefore neither she nor any other woman with child were proper women to

be with her, the Court agreed that such a clause should be inserted in the writ, and ladies were named on the part of the heiresses to attend the lady during her pregnancy and till her delivery, but they must not name any spinster ; and the mother was allowed to visit only.

This writ appears to have been again unused for a period of upwards of fifty years, when it was applied for, in 1786, in *Ex-parte Bellett* (2 Dickens, 781 : 1 Cox, 297), whereof the reporter in Dickens makes this entry : "The cursitor was ordered to make out a writ *de ventre inspiciendo*."

It was again applied for in *Ex-parte Wallup* (2 Dickens, 767 ; 1 Co. Litt. by Thomas, 167, note ; 4 Bro. C. C., 90), where it was granted against a married woman, whose husband had been more than ten years abroad, on the application of a devisee in a will ; there being a limitation in the will that if she had a male child within forty weeks after testator's decease it should take previous to the devisee ; but it was to remain in the office of the cursitor for fourteen days or twenty-one days and not to be delivered if the widow, in the meantime signed the register book consenting that two midwives, to be named by the Earl of Portsmouth, the petitioner's father, should make an actual examination with her permission. The Lord Commissioners at first doubted whether such a writ had issued on the application of any other than a *hæres natus*, the petitioner being a *hæres factus*.

There appears to be no case reported, in any law reports, where any controversy has arisen in respect to this writ in England during the present century, but the latest case in the Courts has been preserved in a medical authority (16 London *Medical Gazette*, 697, Saturday, August 15, 1835), which gives substantially the following account :

"During the last month or two, a case has been pending in the Vice-Chancellor's Court which could not have been very edifying to the public nor satisfactory to the medical observer. It related to the enforcement of the ancient and barbarous writ *de ventre inspiciendo*. The late Mr. Fox, of

Uttoxeter, executed his last will and testament in January, 1835, whereby he devised the great bulk of his real and personal property to the use of his friend Ann Bakewell, spinster, for the term of her natural life as long as she remained sole and unmarried, and after her decease or marriage, to his relation John Marston. Early in the spring, he himself married Ann Bakewell, and died in May of that year, about six weeks after his marriage, and in the sixtieth year of his age. Subsequent to his decease his widow announced herself with child, and entered a caveat to the probate of the presumptive legatee, whereupon the latter immediately applied for a writ—the ancient writ above mentioned—to ascertain the lady's pregnancy by an examination. It cannot be denied but that it was necessary to have the fact of the pregnancy made out, and that there is no other way of having proof of the fact than by personal cognizance of it. The lady, however, became alarmed by what she had heard about the nature of the examination, and with the advice of her legal friends petitioned the Court not to grant the writ. On this the counsel on either side joined issue. Counsel for the widow argued that there was no ground for issuing the writ in this case, as that writ presumed the existence of fraud on the part of the female, but he was overruled by the Vice-Chancellor, who held that suspicion of fraud was not necessary, and that the mere assertion of pregnancy was sufficient to support the application. Although Mr. Marston did not insist, in the first instance, on having the provisions of the writ strictly complied with by obliging the lady to submit her person to be examined by a mixed jury of men and matrons, wanting only to have the report of some professional examiners of his own choosing, yet, since this was prevented by the reluctance of Mrs. Fox to submit to any examination by a stranger, the conditions of the old form were held to be the only alternative.

“The widow had her petition well supported by affidavits. She herself stated that she believed herself pregnant, and that she was quite ready to answer any questions that might

be put to her on the subject by medical men selected for the purpose ; but that in consequence of the recent death of her husband, together with many circumstances that had subsequently taken place, her mind was in such a state as to render her unable to undergo the examination required by the writ. The surgeon who attended Mr. Fox in his lifetime stated that he had examined Mrs. Fox and believed she was pregnant ; that if the writ were then executed it would be attended with pain and considerable danger to the lady's health, and would imperil the life of the child, but if it were deferred for two months all doubts and all danger would be removed. Other witnesses deposed that Mrs. Fox was a delicate woman, and a woman of modesty.

“ Under these circumstances the Vice-Chancellor, who said that from reading all the affidavits he was satisfied that there was strong ground for believing the lady's statement to be true, ordered the matter to stand over for a month, which was agreed to. At the end of that period it appeared that the parties were no nearer to a mutual understanding than before. Affidavits from the attending surgeon and another medical man were read, to the effect that Mrs. Fox was in her fifth month of pregnancy, with which, however, the opposing counsel were not satisfied. The Vice-Chancellor thereupon said that there was no doubt the applicant had a right to the writ, but that the lady, on the other hand, did not deserve to be treated with the severity of the ancient process. He therefore adopted a middle course ; he left it to the Master to appoint two matrons, who, with a medical man on each side, should visit Mrs. Fox once a fortnight, giving her two days' notice previous to each visit.”

The editor thereupon proceeds to say that the words of the writ are peremptory ; the Sheriff is commanded to select twelve men and matrons, who shall in his presence make the requisite examination. “ Yet,” he exclaims, “ such a writ actually exists, has been suffered to exist, notwithstanding the sweeping act of abolition of ancient writs, which so recently passed. “ If this writ,” says a learned lawyer, “ were to be

strictly executed it would be an intolerable grievance ; on the other hand if our courts of justice should, without authority from the Legislature, change the established form for the sake of softening its rigor, it would be a dangerous precedent." It is true, that in the latter times there has been an understanding that the writ may be carried into execution in a way not offensive to delicacy, by substituting for the four and twenty discreet men and women, a jury of medical referees with power to investigate and determine. But why has not this been made the law ? Why has this old and disgustingly indecent writ been retained ? We know of no answer that can be given except that it has so happened through the inadvertence of the parties intrusted with the purging of the Register. Our legislators, most probably, are not all aware of the survival of any such legal instrument."

Other medical works have also noticed this case, which is quite remarkable on account of its absence from the legal reports (Taylor's Medical Jurisprudence by Griffith, Am. Ed., 1850, 428 ; Signs and Symptoms of Pregnancy, by Montgomery, Ed., 1858, 67 ; 1 Beck's Medical Jurisprudence, 10th ed., 204 ; same 11th ed., 250.)

Nor are the medical authorities alone desirous to have some further legislation. An able legal writer (Harge, n. 3, 8 b., 44) says : "I cannot conclude without suggesting the necessity of an act of Parliament on the writ *de ventre inspiciendo*. . . . If the writ was to be strictly executed it would be an intolerable grievance."

So far as we have been able to ascertain, there is no instance of the use of this writ in this country. It is not referred to in our ordinary digests. Kent's Commentaries are silent on the subject ; it is mentioned in Burrill's Law Dictionary as a writ which a presumptive heir may have in England to examine a widow suspected of feigning herself pregnant (with a view to produce a supposititious heir to the estate), in order to ascertain whether she be with child or not ; and in Bouvier's Law Dictionary, after fairly stating the terms of the writ itself, this statement is made : "It is granted in a case where a

widow whose husband had lands in fee simple marries again soon after her husband's death, and declares herself pregnant by her first husband, and under that pretext withholds the lands from the next heir."

It will be readily perceived that if the learned author had said that it had been granted in such cases he would have been perfectly correct, and it undoubtedly would be granted in such a case if the writ still existed. The statement, although true, is nevertheless erroneous in conveying the idea that the writ could only be obtained in case of a marriage.

It may be interesting in this connection to state the result of the Rollwagen case, in which the application for this writ was made in our Supreme Court. The matter came on for argument before the Hon. E. L. Fancher, one of the Justices of that Court, in the month of September last, when the application was presented in an able argument by Mr. Campbell, and seconded by Mr. Langbein, who, although not directly before the Court, was heard on behalf of the sons. The counsel for the widow took the objection that there was no such writ in existence in this country, and that it had never been recognized at any time either in the colonies or in the States; that as matter of law the adoption of the common law in this country did not bring with it the writs and practices of the common law as they were known in England, instancing that the writ of habeas corpus had been specially enacted; that there was no case in the law books that showed that the writ was in existence now in England; but that admitting that it did there exist at the time of the American revolution, there had been a repeal of such writ by implication by the enactment of a law that punished such act hereinafter set forth, and that such a proceeding was repugnant to the moral sense of the times and could not be enforced.

Judge Fancher then asked the moving counsel if he believed that such an outrage would be tolerated in this age as that indicated by the writ; and at the close of the argument, without further deliberation, denied the application on the

ground that the writ did not exist in this State. It would be an act of injustice to the sense of delicacy and honor possessed by the counsel for the petitioner not to state that he prefaced his argument with a disclaimer of all intention to ask the enforcement of the writ in its enormity and barbarity, and throughout expressed a wish to have the modification of the writ that had almost invariably been made in England.

It could easily be foreseen that the denial of the application, however, would prejudice the cause of this child in the action which had been commenced, and to avoid such result, and being unwilling for ourselves to be a party to any fraud, if such were attempted, we immediately proposed to the counsel that we would embody in the order a provision that the counsel might name one physician, and the Court another, who should attend, on suitable notice, with the lady's family physician, to ascertain the fact of her condition, and to be present at the time of her confinement; which offer was accepted, the physicians named and notified, and they subsequently attended at the birth of a daughter, who had the good fortune of becoming heir, at the instant of her birth, to upward of one hundred thousand dollars.

While the universal sense of mankind will applaud the decision of Judge Fancher in respect to this writ, there have been, nevertheless, men of profound ability and research who have believed in the wisdom of this writ, or rather of some legal method of preventing this heinous crime. Thus in the well known work of Dr. Kennedy on *Obstetric Auscultations* (Am. Ed., 1843, p. 301, note B), in speaking of this writ, the distinguished author, after referring to the case of Wallup, in 1792, as the last use of this writ he had been able to find, declares: "I confess that it is not an easy matter to assign a satisfactory reason for the disuse of a remedy, the application of which, since that period, would, in many instances, have been useful."

It is probable, however, that Dr. Kennedy was ignorant of the fact, although no man may be ignorant of the law, that

a section of the Revised Statutes of this State provides (2. R. S., Edmunds Ed., 696 ; § 51) that every person who shall fraudulently produce an heir, falsely pretending it to have been born of parents whose child would be entitled to a share of any personal estate, or to inherit any real estate, with the intent of intercepting the inheritance of any such real estate, or the distribution of any such personal property from any person lawfully entitled thereto, shall, upon conviction, be punished by imprisonment in a State prison, not exceeding ten years.

It has appeared that the writ de ventre inspiciendo has in at least one instance prevented a fraudulent presentation of an heir to an estate in England, and that there is no instance of a successful fraud ; but the severity of our statute has not prevented such an attempt being made here. The instance is so familiar to you all, on account of both the legal and medical professions being concerned therein, that a brief notice of that case will suffice. Dr. Burdell, a physician residing in Bond street, was found murdered in his own dwelling under circumstances that implicated a Mrs. Cunningham, who was subsequently arraigned, but acquitted from lack of proof. Immediately after his decease she claimed to be his widow, and subsequently pretended to be pregnant. Mr. A. Oakey Hall, the District Attorney of the City and County of New York, having discovered the plot, the more effectually to frustrate it, through the detectives, aided in its execution until the production of the "bogus baby," as it was universally called, when Mrs. Cunningham was arrested, under the above statute ; but by reason of premature action she was held not to have violated the statute. (3 Pack. Cr. R., 520.)

The uncertainty of the determination of such a jury of matrons as are called for in this writ may be another reason for its abandonment at a time when the midwife has almost ceased to exist. In the analogous case of a woman condemned to death for a crime who claims to be pregnant, there is a humane provision of the law that the innocent unborn offspring shall not suffer for the guilt, nor with the guilty

parent, and that the mother shall be reprieved until the child is born, and the condition of the woman is to be ascertained by a jury composed of twelve women.

There have been more than one or two modern cases in which a jury of matrons committed a gross mistake in leaving an unfortunate woman for execution, they having examined her and pronounced her not pregnant, the most notable of which was the Norwich case, in England, where a convict in the fifth month of her pregnancy would have been executed under such circumstances but for the humane interference of two or three members of the profession (16 *London Medical Gazette*, 697).

In this age the execution of this writ, in its enormity, would be licentious and immoral. In the ages when the common law was born and followed, our Anglo-Saxon ancestors were fierce, bloody, devoid of sentiment, and essentially but little better than savages. With them the rights of property were more precious than the rights of persons. Many, if not most, of the crimes we deem felonies were punishable by them with death, and in the higher crimes against the person the death penalty was intensified by tortures to the living and indignities to the dead. Even in this century, in England, as a part of the punishment for one crime, the bodies of those executed were to be burned in jail, and for another the bodies of women were to be delivered up to surgeons for dissection; and this was such a substantial part of the punishment that its omission made the sentence illegal (*Jane Fletcher's Case*, R. & R., 58). Without dwelling on details, it will be sufficient to give the punishment for treason to show how barbarous that age was. In case the party accused of treason refused to plead, he was stretched on his back, a weight put on his chest, and he was thus starved to death. When he pleaded and was convicted, he was first to be hung, before death to be cut down and restored, then before his own eyes he was to be disemboweled; he was then beheaded and quartered. If a woman, her sentence might be mitigated by simply burning her to death! An age that . .

could devise such cruelties could not be mindful of any delicacy to women in general, and yet in this writ, as in most of the rules of the common law, there was the great underlying principle of right, however blindly and even wrongfully followed.

In conclusion, therefore, we express, in sympathy with the judgment of Dr. Kennedy, our deliberate conviction that legislation for the prevention of this crime is needed in this State, not in the brutal and indecent form of the common law writ, but of a character that shall accord not only with the customs but the scientific knowledge of the age. No sensitive, delicate, and truly refined lady would refuse to permit a medical gentleman of the standing of those who would be selected by our Courts or counsel to visit her in connection with her own family physician, to make such an examination as would be needed to determine her condition. A refusal under such circumstances would justify the gravest suspicions. Provision also could be made that the physicians might make a report that should have the legal effect of the report of referees. We advocate the passage of such a law because we believe that to be the wisest and best form of legislation which prevents rather than that which punishes crime, and that such a law would endure until that state is reached when they neither marry nor are given in marriage, but are as the angels of God.

EXPERTS AS WITNESSES.*

BY HORACE BARNARD, ESQ.

DR. REID, in his "Inquiry into the Human Mind," uses these words: "The wise and beneficent Author of nature, who intended that we should be social creatures, and that we should receive the greatest and most important part of our knowledge by the information of others, hath for these purposes implanted in our natures two principles that tally with each other. The first of these is a propensity to speak the truth, and to use the signs of language so as to convey our real sentiments." In this the learned Doctor is unfortunately at direct issue with another equally renowned philosopher, at least so far as regards the use of language. Possibly, from a realization of the existence of other ideas on this subject, which have also received expression in the teachings of the Church of Calvin, the Doctor is not slow to qualify his flattering estimate by somewhat humiliating confessions. It is natural to speak the truth, and it is unnatural to lie, but it is a result of the ease of the one and the difficulty of the other. Speaking truth is as agreeable as taking our daily food, but falsehood is as nauseous as taking physic. Now, pleasant as it is to consider our nature as being what the Doctor describes it to have been in the beginning, human experience has more than verified his apprehension that "there may be, indeed, temptations to falsehood which would be too strong for the natural principle of veracity, unaided by principles of honor and virtue." How to afford it that aid, so that men could indulge in safety their other natural propensity to

*Read Feb. 26, 1874.

credulity, has been a source of anxious study to men of all ages of which we have any record. It would not be possible, if proper, to even sketch these various efforts, which one and all, recognize man's fearful declension from that state of moral elevation and equilibrium so happily described in the inquiry. It will be quite sufficient for our present purpose to devote a little space to that method which we have received from our ancestors, and which it is our duty to hand down unimpaired, if not improved, to our children.

This method of evoking from witnesses, upon a question of disputed fact, such truthful utterances as to warrant reliance, is such as, we may well conceive, would recommend itself to a brave, liberty loving race. It is to compel them to testify openly and publicly, and under the sanction of oath, in such manner that their utterances can be sifted by those interested to ascertain the truth of their statements. Nothing being admitted but what could be openly avowed and shown, the trial *per pais*, or by the jury, taken from the people and sworn to impartiality, naturally recommended itself to all the northern nations as the fairest as well as the best mode. It certainly calls into exercise those sentiments of honor and virtue, or courage, which we have seen are needed to protect our principle of veracity from the temptations to falsehood. Coupled with the comparatively modern privilege of representation by counsel learned in the law, and the wide range and power given to cross-examination, there would seem to be but slender chances of its failing to attain its object. Where it has failed, the cause of the failure will be found in the moral condition of the community from which the jury is drawn. Of this they are the true representatives, now as formerly, neither rising above it nor falling below. If, therefore, we find that certain acts, of the commission of which there can scarce be doubt, are lightly treated if not wholly condoned by the verdicts of our modern juries, we should apply our censure to the source of the evil in the lax moral tone of the community, or find an excuse in the manner in which the testimony had been presented. Regarded originally as the safe-

guard of the subject or citizen from the oppression of power, the jury is unfortunately itself subject, only too much, to the control of popular opinion. Against this danger, in turn, devices have been adopted (and an oath is administered), to the end not only that the truth of the statements made to the jury may be tested and determined, but that they shall true verdicts give according to the *evidence*. Hence the duty of the Judge presiding at the trial to exclude from their consideration, in former days, the testimony of interested parties, that they might not only be required to pass upon the utterances of impartial witnesses; and, now that this barrier against temptations to falsehood has been swept away, the existing duty of excluding from their consideration statements made on hearsay, and everything which cannot be reduced to statements of fact on positive knowledge. Of the manner in which this judicial duty should be performed, what should be admitted, and what excluded, and of the little effect which the neglect of it should produce on the minds of an ideal jury I cannot better explain than by the following extracts from "Phillips' Golden Rules" for their guidance:

"An honest juryman should suffer death rather than consent to any decision which he feels to be doubtful or unjust, or which, in his own private judgment, is not warranted by clear and uncontrovertible evidence.

"Every juryman should be *jealous* that no other *opinion* than his own directs the decision; for his office would be a mockery on himself, on the parties and on his country, if his decision were not the result of his own unbiassed convictions. The juryman, who, ignorant of his duties, is inattentive to the progress of a trial, and decides on the suggestions of others, betrays his sacred duty, and is himself unworthy of the privileges of the law and of the protection of justice.

"In deliberating on the verdict every juryman is bound to think for himself, to give his individual opinion freely and boldly, and to bear in mind that it is the sole and entire object of the institution of juries, that every juryman for him-

self should decide according to his own judgment on the points at issue ”

Having thus laid down these cardinal rules for the guidance of the jury in forming their verdicts, he exhorts them to guard against popular prejudice, the insidious sophistry and daring artifices of counsel, and against undue influence in whatever quarter it may arise ; and to decide only on an abstract and cool consideration of the proved facts and the positive evidence of credible witnesses.

When one reads rules for conduct like these, a vision of the Golden Age arises. If the jury, who are to be taken from the mass and fairly represent the people, are capable of appreciating the nobility of their duty, and have the courage and ability to perform it, there would seem to be no need of the Judge to protect them from the insidious sophistry and daring artifices of counsel, or undue influence whatsoever. The people among whom such juries are common, scarce need their assistance. Unfortunately, however, the moral tone of mankind has not yet risen so high as to render obsolete the ninth commandment of the Decalogue, or to destroy the necessity of insisting upon the well considered rules of evidence. The insidious sophistry and daring artifices of counsel have not wholly failed of a market. Increasing wealth has brought in its turn increased luxury, with its attendant passion for display, and the need of great and greater means for its gratification, with less and lesser power of resisting temptation. The ordinary struggle of life has grown to be a competition so keen as to present the only alternatives of success or destruction. What wonder is it, then, if we find the Courts invaded by the parties to this struggle, and the attempt, too often successful, made to bend their time-honored rules to the advancement of selfish interest ?

I have described the tribunal, in the words of Phillips, such as it ought to be, but when I add that it is of and represents the people, subject to like passions and sharing in their short-comings, it will be apparent that a great privilege is accorded to that witness, who is to such a degree absolved

from the ordinary requirements of law as to be permitted to offer it his opinions with authority. This is the exceptional power of the expert, and it is mainly in his character as a witness before a jury that I propose to consider him. Were he an exceptional man the inquiry might be unnecessary, but he certainly is not.

It is evident that in a case in which the nature of an invention, science, or other mystery is involved, the mere narration of the technical terms thereof would be of small aid to an ordinary jury in forming their verdict, and it is equally plain that any explanation or translation thereof would be perfectly right and proper. This, from the necessity of the case, is the proper province of the man of superior skill or experience therein, or—as we term him—of the expert. From this simple duty, and the correlative power of informing the jury of the proper nature and relation of facts otherwise proved to them, has been derived the custom of admitting his opinions in defiance of the ordinary rule.

It would seem from our experience that it is not in social differences only that explanations are dangerous. The recurrence to the “hypothetical case” as a means of restraining the expert from assuming *directly* all the powers both of judge and jury is an after thought, is a weak invention, which has, if it has done nothing else, stimulated the inventive powers of counsel. Between the testimony of experts and the sophistry of advocates the results which one might expect from the observance of the Golden Rules of Phillips have hardly been reached. Too often have verdicts been but the record of the interested opinions of experts, shocking the sentiment of the community from which they have been drawn.

The frequent recurrence of such results, following the admission of expert opinions as testimony, would seem to point to the propriety of either remodelling our system of trying disputed questions of scientific fact, or the exclusion of expert opinions from the jury. The advocates of this latter measure, daily growing more numerous, are met by the as-

sertion that there is a necessity for their admission—that otherwise there would often be a total failure of proof. Without adopting either side, or admitting that opinions can be called proof in any sense, let us inquire a little into this excuse for their admission.

As it will not be contended that merely theoretical opinions should be admitted, we have only to deal with those which are founded on fact (and medical books being excluded as evidence, in that direction at least)—on facts ascertained by personal observation and study. When, therefore, under the present system an opinion is admitted, it is either preceded by proof of qualification as expert, or tested to that extent by cross-examination, by either of which the facts are brought out on which it is founded. The opinion is reduced, therefore, by analysis to a result of an exertion of the memory, comparison, and reasoning powers of the expert witness. In regard to this, the highest court in our State (in *Newell vs. Doty*, 33 N. Q., 94) has decided that a question calling for such an exertion is not allowable. Apart, however, from the “authority” cited, why could not the witness have testified to these facts? If the witness was confined to a simple narration of his knowledge, the counsel qualified to ask the question could, doubtless, as well exert his reasoning powers in a fair, open argument, the soundness of which could be maintained or overthrown by his opponent. Surely, therefore, in the interest of fairness, it will not be contended that the witnesses should be allowed to argue the case by way of testimony under plea of necessity, and an argument on facts is all that a well founded opinion amounts to.

In the case of *Carter vs. Bohn* the suit had been brought to recover certain insurances on a trading fort in the East Indies, and was defended on the ground of concealment of material facts from the insurers, contained in two letters of the assured. On this point—of the effect which those letters would have produced—the defence offered the testimony of the broker as an expert, “that in his opinion those letters ought to have been shown or the contents disclosed, and if

they had been the policy would not have been underwritten." On this Lord Mansfield says: "Great stress was laid upon the opinion of the broker, but we all think the jury ought not to pay the least regard to it. It is the mere opinion—which is not evidence. It is an opinion after an event. It is opinion without the least foundation from any previous precedent or usage. It is an opinion which, if rightly formed, could only be drawn from the same premises from which the Court and jury were to determine the cause, and therefore it is improper and irrelevant in the mouth of a witness."

This case was one relating to insurance law, which, as it involves in the formation of the bargain for insurance the calculation and estimation of future risks, would seem to afford proper ground for the operation of expert opinions. We have, nevertheless, seen it excluded by such a leader in the law that no man may hesitate to follow in his footsteps. That it is still admitted is true, but that there is any necessity therefor I am bound to deny. Let us look at a few instances without discussion:

1. An expert machinist can opine that a machine is not made in a workmanlike manner (*Curtiss vs. Guno*, 26 N. Y., 246); that the principle of two machines is the same (*Barrett vs. Hall*, 1 Mass., 470). Manner of building a bridge (16 N. Y., 158).

2. A medical man may give his opinion as to the permanency of injuries (*Buell vs. N. Y. C. R. R.*, 31 N. Y., 314).

3. Attesting witnesses as to the testator's mental condition at the time of the execution of his will (*Delafield vs. Parish*, 25 N. Y., 9-97).

The opinions of the medical experts—not under oath in this case—were regarded by the Court as "valuable disquisitions," instructive to the Court, but not evidence. That they are precluded from forming their decision, by law, from anything but facts sworn to in a legal manner. Judge Selden, however, in his dissenting opinion, holds that "when a physician, from personal observation or an authentic description of the symptoms of a case has arrived," etc., his

opinion is received in evidence. As far as the opinions bear upon the medical symptoms of the case, they are to be regarded as the opinions of experts; but as far as they rest upon testimony as to mere want of intellect, they are no better than the opinions of ordinary witnesses.

4. A medical man conversant with the disease of insanity, having had prior observation of the habits, conduct and appearance of the prisoner, may give his opinion as to the sanity or insanity of the prisoner (*People vs. Lake*, 12 N. Y., 363); though it is doubted, on principle, whether, he can after only hearing the testimony; he may be asked, under cover of the hypothetical case, the same question in the main—he certainly cannot on a part of the testimony (see post, *Sanchez vs. People*, 22 N. Y., 154.)

Omitting the thousand others, these are enough to show that the expression of the opinion can be obviated by narrating experience, and that the real reason for their admission at all is the supposition that labor is saved thereby. If therefore, we cannot find a sufficient basis for the plea of necessity in introducing well founded opinions, it is not likely that we will find sufficiently good grounds in the *relief* which it brings to the Court as a seat of judgment. As now introduced the experts who give opinions are produced by one side or the other, and the jury, who listen to the final charge, cannot help perceiving that it is often dictated by the witnesses. Such cases so decided are not, and ought not to be satisfactory. In one shape or another they rise until they reach their final rest in the Court of last resort, or the utter exhaustion of the suitors.

In that class of causes which relate to inventions, the duties of the expert are so clearly defined in the theory, at least, of the law, that they would seem to be, at last, in their proper position as aids to the Court, in patent causes, to determine what is intended to be patented, the certainty of the specification, so as to entitle the invention described to patent, and, in short, to decide what the patent is for and whether it is valid. The Court is to instruct the jury as to the meaning

of the specification and the legal construction of the patent; but when there are terms of art in either which need explanation, or other surrounding circumstances which affect the meaning of the specification, these form a qualification in the instruction which calls for the assistance of experts. They are, from their experience, to explain the terms of art and surrounding circumstances. The statutes require that a specification should so describe an invention that those skilled in the art, etc., may be able to use the same. Consequently, experts may, very properly, explain these terms, and show whether the invention is practically useful. Of course, if the Court possessed the requisite skill, this aid would be both unnecessary and improper; but until that hope of inventors—a proper tribunal for the trial of patent causes—is organized, we must be content with what we have.

From this short sketch of the duties of the Court and the experts, one would scarcely expect that there could be more than one *opinion* in a patent cause—that of the Judge, given to the jury. Let us glance at the facts. Inventors are numerous, courts few and time precious; hence, a class of men has arisen who have become professional experts in patent suits, and who command a rate of compensation which may well excite the *envy* of less fortunate men. It may be, therefore, only envy which inspires the suspicion that the nature and manner of their employment—not to mention the pay—tend to warp their judgment. Whatever the reason, the fact is well known that there is scarce a patent cause brought into court which is not prosecuted and defended by means of expert opinions on both sides. I cannot better illustrate this curious fact than by repeating, as nearly as possible, the words uttered by one of our most distinguished advocates in open court. Referring to the immense heap of expert testimony introduced into the cause, and then piled up before his antagonist, he said, "That he would not have the slightest difficulty in furnishing an amount equal in bulk and quality which should contradict it flatly. I know," said he, "two brothers, experts by profession, of high reputation and ac-

knowledgeable skill, one of whom I have examined on the direct and the other on the cross-examination, in the same suit on the same matter, and in relation to the same state of facts, and I have received from them diametrically opposite opinions thereon." The gentleman whom I have quoted is a man of great ability but also of equal charity. Doubtless, therefore, he would join his professional brothers in the regret that the laws of mechanics, and what are called the exact sciences, are so unsettled as to produce such diverse opinions.

These opinions, such as they are, are submitted under a very wide construction of the statutes already referred to. They are given under oath, and being ordinarily taken in form of depositions, are subject to the close scrutiny of prolonged cross-examination. If sound, this develops the facts on which they are founded, and, at the same time, would seem to take away all reason for their admission—since, as has been stated, the Court is bound to pass only on facts, and the formation of the effective ruling opinion is the province of the Judge and jury. The allowance of them on one side begets a necessity for the production of counter opinions on the other; and the manner in which this is at present conducted inflicts a wrong upon the public. Few inventors are rich enough to afford one of these expensive contests. Either, therefore, their inventions are abandoned, or they pass for a trifle into the hands of some powerful combination, which is thereby enabled to inflict all the mischiefs of a monopoly upon the people.

This cursory glance at the confusion which often arises in suits involving the application of mere mechanical principles from the contradictory testimony of costly experts as witnesses, is enough to satisfy a reflecting mind of the danger which attends their unrestrained use in cases less capable of exact demonstration. If great wrong and injustice can be done in matters capable of material proof, what may not happen in cases involving the mysteries of sciences not yet fully explored, and which are professed by different and con-

flicting schools? The testimony of the former class, *known* to have been paid for by the party producing it, may be weakened, if not destroyed, by making manifest its partisan and disingenuous character; but how will we meet the testimony of experts belonging to an honorable profession, and deserving, by their private virtues, of the respect of all? It is not to be supposed that such men, under the restraining influence of their own honorable character, and especially when under oath, will deliver opinions in which their own faith can be shaken—and it is not for the purpose of restraining such experts from the utterance of intentional falsehood that the strictest rules of evidence should be invoked; but when we recall the lessons of experience, and bear in mind the diversity of opinion which has always existed, the conflicts of the schools, the proverbial disagreement of doctors, and the imperfect and unsettled condition of the science of medicine itself, does it not seem a little hazardous to admit (see *People vs. Lake*, *supra*) the opinion of a medical expert as testimony in cases involving life and death? Did our system admit of the rendering of Scotch verdicts of “not proven,” one objection to their admission might be removed by the instruction of the Judge to the jury to limit their verdicts in that manner, where their decision depended, in any degree, on the opinions of experts. But with the necessity of deciding positively one way or the other, it would seem much better to cling to the well established rule of requiring facts, and to reject every opinion which cross-examination could or could not reduce to a concise narration of experience. It is certainly the safer rule, and more accordant to the spirit of our institutions.

The principle of our criminal law that the prisoner should have the benefit of the doubt, and that it is better for the community, in sustaining their respect for law, that ten guilty persons should escape rather than that one innocent person should be punished, would seem to demand the exclusion of all testimony, which, like opinions—even of experts—failed in the element of certainty. With us the fate of the accused

is to be decided by the testimony of credible witnesses to positive facts—and it is for the jury alone to form an opinion from them when so proven, and yet the books are full of cases in which this testimony has been allowed.

In that of the *People vs. Lake*, physicians, as experts in insanity, were in the first instance allowed to give their opinion on the sanity of the prisoner after only a partial hearing of the testimony, and the accused was convicted and sentenced. Reversed as this sentence was by the Court of Appeals, although the Court doubted whether medical witnesses ever should be allowed to give a general opinion on the insanity of a prisoner, it yet holds that such opinions may be evidence when the expert has had opportunity for observation, and is conversant with the disease.

In the case of the *People vs. Montgomery*, (13 Abbott's Reports, N. S., p. 207), tried first in 1870, the accused was convicted and sentenced for the murder of his wife, mainly, if we may judge from the report, on the testimony of physicians, that he was sane at the time. "The question at issue on the trial (says the Court) was chiefly a medical one, in respect to which the opinions of medical men would be likely to exert a great if not controlling influence." In examining this case for the purposes of this paper, at the suggestion of Mr. R. S. Guernsey, I discover such a wealth of illustration that I am tempted to make larger extracts. While differing from him as to the right of a jurymen to have a private opinion, for reasons given in the *Golden Rules* cited, I cannot but pay the highest compliment to Mr. Guernsey for the learning and research shown in his note appended, and which forms a portion of an article which I have not had the good fortune of reading.

It is true that the admission of these opinions is subject to the after charge of the presiding Judge; but even where, as in *Cole's* case, the jury are told by such a Judge as the late Judge Hogeboom that they must estimate their value—that they are the ultimate judges on this point, or they are as fully discussed as in *Montgomery's* case—the jury are not always

able to emancipate themselves from the thralldom which the supposed superior wisdom of the expert imposes. And this again furnishes a serious objection to the admission of the expert as a witness, apart from all interested motives; and if the sciences professed were reduced to the perfection of certainty, instead of being for the most part imperfect, he would still be objectionable as a witness; but with the present state of uncertainty in medical, chemical and related sciences, the very reputation of the man intensifies the objection. The jury are not competent to criticise him, and the higher his position the more they will be influenced by his opinion. If, therefore, the school in which he has obtained his instruction and subsequent success should happen to be incorrect in its tenets, and he clings thereto, as we know he will, what danger do we not incur when we permit him to leave the narration of the facts of observations and utter the opinions of his sect! How shall we disabuse the jury, and confine them to their duty, unless by calling in another expert, equally learned, of the opposing school, and by their conflict seek to determine the law and the facts? See *Montgomery's case*.

Fortunately for courts and community such conflicts are rare, and even when they do occur the juries recollect that they too have a right to an opinion. They may listen patiently to learned disquisitions which they do not comprehend, but often the verdict proves that the effort has been labor lost. Need I do more than refer to that somewhat recent death by a pistol shot, which called forth such able essays on the deadly effect of soporifics and the lethal consequences of shock. While reading the record, one is tempted to believe that the jury alone remembered that there was a shot wound in the bowels. In the early days of the West, there were model juries, who decided that every man found with a round hole through his head had died by drop fever, or visitation of God, but when a bullet was found in the head gave it the credit of the death.

The case to which allusion has been made would seem to have been one in which the scientific testimony would have

taken the simplest shape, and that beyond the evidence of the surgeons none other could have been admitted; yet, under the relaxation of the rules of evidence, we have seen how great a cloud of witnesses were allowed to ventilate their theories in its connection. The result, if it has manifested anything, has shown the wisdom of greater strictness of their exclusion, if only for the sake of economy.

In cases of death by poisoning there is an apparent necessity for scientific testimony. Let us see if they afford any better reason for the relaxation of the rules of evidence. Suppose, then, that all the preliminary investigations by chemists and surgeons are completed and the case on trial—what ought to be the testimony of the expert called? Certainly nothing more than the description of the processes employed, a positive averment of the chemical result, and possibly an assertion of the absence of other causes of death. But here he should stop. By right should either chemist or surgeon say that, in his opinion, the poison found was the cause of death? If an undoubtedly deadly poison be found in sufficient quantities to produce death, doubtless he can say just that fact—this will be enough to enable the jury to do their duty—and here his office ends. Allow him to say more, even in a case free from doubt, and a precedent will be formed for use in cases where the facts are not so clear. Remember that assertion may be shaken on cross-examination, but opinion, even when producing conviction, gives no good hold.

To show how carefully even such testimony as is based on scientific experiment, the result of which rises from opinion to the evidence of a fact demonstrated, should be criticised before admission, let us refer to one or two recent cases:

In the first—that of Dr. Schoeppe—there was every apparent reason for charging him with the crime for which he was brought to bar, and yet, as the result has proved, there was the greatest necessity for even something more than the strict application of the rules of evidence to secure him a fair trial. Of foreign birth and manner, he labored under the weight of popular dislike and prejudice. His engagement to marry Miss

Steinecke, a woman so much older than himself, the consequent will in his favor, his constant attendance upon her, furnished the apparent motive and opportunity for the commission of the crime. Her sudden death completed the chain of suspicious circumstances. It is evident that the facts in the case had already made their impression upon Dr. Aiken, the expert called by the State, before he began his investigation, and that he had already formed his opinion before he had ascertained the facts. His own convictions blinded him to the truth that his duty compelled an exhaustive search for facts, and not for the means of supporting his own opinions. The circumstances already mentioned lead us to take the most charitable view of his actions, and to give him credit for an invincible conviction of the guilt of the accused; nothing less than this will excuse his manner of performing his scientific duties, as subsequently shown. Were it possible in this paper to comment at large on all the processes employed by him to produce the result attained, it is not to be doubted but that it could be shown that at each step he took something for granted—that every one of his experiments was founded on a false assumption, and the result a mere expression of opinion. Fortunately it is not necessary. We all know the effect produced by his *ex parte* testimony on the jury, and to whom belongs the credit of saving the victim of this “opinion” and public prejudice from the gallows. Had Dr. Schoeppe been less intelligent than he was, or less able to appeal to the assistance of his fellow professionals, he would undoubtedly have added another name to the list of the victims of what is called circumstantial evidence—in reality the admission of mistaken expert opinions as evidence. This result of the final trial, obtained by such unheard of exertions by a class of men second to none in influence, due to character and reputation, made manifest not merely that the chemical investigation of Dr. Aiken was conducted on a mistaken basis and in a faulty manner, but that a system which permitted an opinion, as I may call the *ex parte* investigation, to be offered in evidence,

was in itself faulty. Nor is it to be doubted that the Court which, on a verdict rendered on the strength of such testimony, sentenced an innocent man to be hanged, and brought him so near that fate as to be measured for his coffin to the sound of the carpenters building his scaffold, will for the future require strict proof of the facts of every process, and retain for itself and the jury the expression of opinions thereon.

If it should be said that the case of Dr. Schoeppe is an exceptional one, and that such another would not occur again in a century, it should be answered that such startling exceptions show us the necessity of clinging more closely to the rule of evidence, and that some provision should be made whereby, in similar cases, all danger of the expression of such mistaken opinions might be averted. This would seem to be an easy task, and one which could be performed in manner similar and on the same principles which now regulate the prosecution of criminals by the State. Every one knows that a criminal can obtain not merely a statement of the crime with which he is charged, but a list of the witnesses by whose testimony the charge is to be substantiated, and that all *ex parte* testimony is excluded. What is there to prevent a similar communication to be made whenever a *post mortem* examination is to be or has been made? Why should not the accused be informed of the intentional process, or of the processes already had, so that by employing experts to attend on his own behalf the possibility of error might either be wholly averted or the chances thereof greatly diminished? The State cannot stoop to surprise a criminal, much less an accused citizen, not yet proven, through conviction of guilt, to have forfeited his right to protection. The investigation necessary is to be used, not for the purpose of conviction but for the manifestation of truth. This is the end of all evidence, the object of all legal and proper processes of trial; and surely such an investigation as the chemical analysis of human remains, the contents of the stomach and viscera of a person dying under suspicious circumstances, which can

scarcely be repeated, should be so conducted as not to rest for belief in its fairness on the opinion, character, or reputation of witnesses summoned for one side only. How much better that such investigation be made under the jealous scrutiny and criticism of a chemist or analyst employed for the defence, who should thereby prevent anything from being taken for granted, and, *pari passu*, with the process, mark the doubts and demonstrate the facts. It is no more to be supposed that this course would be attended with any more danger to the State than the very common practice of assigning counsel to defend an accused who "has no lawyer;" and it would seem that, on the same principle of securing him a *fair* trial, that he is entitled to this aid to his defence. Is it not evident that if this course had been pursued in the case of Dr. Schoeppe, he would never have been tried at all, and that both the State and the accused would have been spared the immense expense and suffering caused by Dr. Aiken's error of mistaking the product of his own process for the producing cause of death? It would seem, therefore, as if an enlightened economy would dictate the adoption of this course, especially where, in cases of life and death, the humanity of the law compels the production (and explanation) of the best evidence before the jury. Without this provision, as long as such testimony from experts is admitted, the accused, when poor and friendless, is exposed to the danger of having apparent proof exhibited against him, prepared beforehand and testified to by an expert in every way disposed to maintain his own testimony. Trained it may be in a faulty school, the tenets of which he has adopted, his professional pride binds him to make good the apparent results of his theoretical experiments, and, as long as he is enabled to testify to his opinions, he is freed from the necessity of determining any doubts that may have arisen. If an obstinate, conceited, or prejudiced man—all of which are perfectly compatible with a high popular skill and character—how will it be possible to permit such an expert to testify to his opinion without incurring the gravest risks?

....

Again, the idea that opinions should be admitted, because otherwise there would be a failure of all evidence, is wrong, not only because with sufficient care the facts on which opinions are based can be themselves testified to, but also because, when in any case the facts could not be testified to, the opinion would, of necessity, be mere conjecture or inference, and, as has been shown, utterly out of place in the mouth of a witness: If an opinion based on facts, then it is an usurpation of the functions both of Judge and jury; if a conjectural one, based on theory, it is certainly not evidence. The admission of such testimony at all would rather seem to be the result of a belief that trials were instituted for the purpose of conviction. With most people the fact that there is an accusation is proof sufficient of guilt, and they deem it but the duty of the State's attorney to adopt every means of developing a criminal out of the accused. To effect this, in the opinion of such persons, any means not absolutely dishonorable, should be employed. Such, however, is not the spirit of *our* laws and institutions, but is an idea borrowed, with fashions of dress and manner, from the French. With that nation the public prosecutor, and even the Judge before whom the accused is examined, is allowed and praised for practices which, with us, would create a popular uprising. With us, as has been said, the prisoner is assured the benefit of the doubt, the only qualification being that the doubt should be founded in reason. How is it consistent with this principle of our public law to allow the introduction of opinions? If we are told that otherwise professional men would refuse to testify at all if they were compelled to swear absolutely, is not that a confession that there is so much doubt on many points whereon experts are usually called for the opinions, such division among leading authorities, that such testimony ought to be wholly excluded? Until the divisions of the doctors, proverbially so difficult to heal, shall be brought to happy accord by established fact and demonstration, let us bear in mind that provision which declares that a man shall only be

deprived of life, liberty, or property by due process of law, and cling the more closely to the strict rule of evidence.

It is scarcely necessary to refer to the recent cases of Mrs. Wharton, of Maryland, or that of Heggi, in our own State. The adoption of the provision of conducting the chemical analysis under the eye of a professional analyst as counsel, as has been suggested, for the defence, would have saved Dr. Aiken from being a second time brought to open shame—the prosecution would have discovered the lack of foundation for the accusation, or it may be, the improbability of obtaining a conviction, and would not have been under the necessity of turning the Court room into a laboratory in the discharge of its duty. These cases have, however, demonstrated anew the fact that one cannot always rely on experts, as used at present, for thorough impartiality, and that if they are to be permitted to express their opinions as witnesses, it is absolutely necessary that both Judge and jury be thoroughly well read on both sides of the question. When this is the fact, it is evident that the true office of the expert would be destroyed, and that there would be no room for that instruction in the science involved which, it is maintained, is the only good reason for his introduction. Thus far I have confined my citation of illustrations of the uses of expert testimony to those cases which involve points of mechanical, scientific or chemical knowledge and experience, and, however imperfectly or cursorily, have, I trust, said enough to show that in all the material or exact sciences there is no necessity for the admission of opinions as evidence. In the criminal cases to which reference has been made, however exceptional they may have been in their circumstances, enough, too, has been said to justify their exclusion, under the merciful provisions and spirit of our public law.

But leaving all that great variety of cases which derive their complexity and difficulty from the insufficient exploration of the fields of material science, we are brought face to face with those which seem to pass beyond the domain of matter and involve us in the mystery of the human mind. In

these cases, strange to say, the position of the expert is reversed. He is no longer a danger to the accused, threatening life or liberty with the faulty products of ill founded theory but he is a peril to society itself. Interposing between the guilty and the sword of public justice, he stays the execution of sentence for crime committed, and so, by rendering punishment uncertain, he weakens that sense of accountability which is the security of civilized society. How to exclude his testimony, or so to admit it as to prevent the utterance of mere conjecture as true opinion, and yet not offend the merciful learnings of the law itself, is a problem not yet satisfactorily solved by the courts. How to brace up juries to resist their own tenderheartedness, and apply the test of reason to the doubts he suggests, so as to find their verdicts in accordance with strict law and justice, is a task for the prosecution which he renders more and more difficult.

Both the statute law and reason itself decide that no man should be held criminally responsible for acts committed when insane; but it is evidently necessary that this immunity should not deprive the community of the power of protecting itself; that in thus creating a city of refuge, to which all criminals might flee, it should at least have the privilege of criticising their right to admission, and of so guarding its gates as to prevent their return to active mischief. Unfortunately for the community, the subject is itself but imperfectly understood, even by those who claim to have devoted their lives to its investigation. How, then, can one apply a test, when as yet there has been no un-failing touchstone found? How require proof of facts where everything is guesswork and conjecture? The popular predisposition to believe in pleas of insanity is shown in the saying "That there were more lunatics outside of than in the asylums" Every man can recall to himself some instance of sudden, unexpected mental aberration, often without apparent or sufficient cause. How then can an easy going, it may be sympathetic, jury be compelled to do their duty to society, if an expert can only be found to opine that the ac-

cused was, is, or ought to be insane? The law itself, which gives the prisoner the benefit of the doubt, would seem sufficiently lenient, but when there is added thereto the aversion of all men to inflict severe penalties, the fact of punishment inflicted becomes so rare as to be almost phenomenal. Nor is this power of paralyzing the arm of the law confined to capital cases only. The efficacy has led to its being exploited in so many directions, that already the right to inflict any punishment at all has been denied, on the ground that the commission of crime is in itself evidence of insanity.

The credit perhaps, of first application of this system of philosophy to practice is due to the late James T. Brady, who, reduced to invention for a plea for Huntington, the forger, gravely urged in his behalf the defence of *moral insanity*. Unfortunately for his client, the jury remembered that the hearts of *all men* were equally desperately wicked, and that being the normal condition, his client was found guilty of the exceptional enormity of sanity and forgery combined. Despite this unfortunate result the defence has found, as has been hinted, great favor in the eyes of all the defenders of the accused, and they have applied their talents with such unflinching zeal to its elaboration, that at the present day there is no unrestrained act of anger, lust or avarice, which has not been classified and passed upon as a peculiar species of emotional insanity. Fortunately, neither my duty nor inclination compel me to offer what would be necessarily inexpert observations on the nature of the various forms of amentia, dementia or mania. It is enough to comment upon the manner in which it is introduced, the appeal to the sympathies, coupled with the usual disquisitions on the infirmities of human nature. If so unfortunate as to have had a known grandfather, the foibles of people long dead and gone are resurrected, with which, and the conduct of the accused, to make up a hypothetical case for the decision of the expert. The kleptomaniac and the murderer both have shared the benefits of the defence,—the one to return to the bosom of

his disgusted relatives, the other to become a leader in the land.

In Macfarland's trial we have an illustration of the "hypothetical case" carried to its highest perfection, and of its eminent success in the conduct of a desperate defence—when addressed to experts competent to give an opinion. In the Judge's charge you will find the following: "Experts have been called in this case. They are to be considered rather as mirrors with which merely to reflect upon you their opinions, but you remain the sole judges whether those reflections are accurate. Sometimes the expert is an enthusiast, sometimes he is a clever charlatan—hence the usefulness of the jury as an umpire." The Recorder nevertheless allowed these experts to hear a narration of the same facts presented to the jury, and declare thereon the opinion that the accused was insane (see Vance and Hammond); whereupon, after a decent hesitation, the jury sheltered themselves behind the opinions of the expert and acquitted the prisoner.

Unfortunately there is no adequate remedy for morbid sensibility, partisanship, or lax regard for the obligations of an oath. For these causes of the failure of justice and defeat of law we must look to the morals of the community; and if we wish to insure fidelity to duty, as prescribed by Phillips to the tenants of the jury box, we must, in some degree at least, reform society. If dereliction from duty was visited with the penalty of social ostracism, the courts would be idle.

In the absence of this restraint we can, however, hope to effect the desired object by removing excuses, behind which the fault when committed can be sheltered. If we remove the temptations of this kind, falsehoods in the verdicts, of juries will become less frequent. When, therefore, we shall find Judges on the bench who shall remorselessly exclude all testimony which, under the strict rules of evidence, does not bear upon the main fact, we will find juries much less

frequently shutting out, as it were, the facts from their verdicts.

In cases in which insanity is the chief defence, it would seem, at the first glance, harsh to insist upon the strict application of this rule. The disease exists in so many forms—it is so often unsuspected even by those in constant contact with the sufferer, that one may well ask how it is to be detected or proved if not by experts—and how can it be proved by them, if not by admitting their opinions? If it were the fact that it can only be proved in this way, that should be sufficient to exclude this kind of proof from trials at law, as this view substitutes theory for that certainty which is the mainstay of society and law; but as the proper expert duty is to describe and explain symptoms of genuine attacks, so that the jury may form a correct opinion, one can hardly see how the charge of harshness could be justified. It would, of course, be bad for the accused if the facts were not strong enough, but it would not be a reason for complaint on the part of the community.

Why should an expert be allowed to express an opinion as a witness? If he is called as an observer, or living record of the symptoms of others, he is not properly a witness, but an addition to the body of the law on this subject. His office is that of a commentator, and his utterances should be used like those on any other of the law.

The duty of the *witness*, it is to be remembered, is to testify to the facts of the particular case. If he is both a witness of the daily condition and acts of the person at the bar, and an expert beside, of course he will be on that account the better able to speak with certainty, leaving to the cross-examination the task of exposing his falsehood or ignorance. If, however, such a witness, so amply fitted by position and skill, should only be willing to testify to his opinion, would one not at once conclude that he doubted the truth of his own observation? Ought it not be properly excluded, or, if admitted, destroy his evidence? If, then, it would not be proper to admit his testimony in the shape of an opinion that

the acts observed were insane, why should an expert be allowed to give an opinion on a hypothetical case, which is propounded to him as a witness? Hypothetical cases presuppose the existence of actual precedents. If, therefore, the expert is the embodiment of a knowledge of these, is it not sufficient that he should narrate his experience, describing cases parallel in character and symptoms with their results?

Doing this he would supply to the Court the lack of what in law we call "reports" on this particular science, and enable it to perform its duty to both the State and the accused. He would, and should, in fact, act not as a *witness* in the case, called by the side which employs and pays him, but as a witness to his science, and not be allowed to act as a willing respondent to the hypothetical cases put to him by a partisan employer. Precedents and descriptions of precedents he might well recite and verify, but their parallelism and relevancy should not be allowed to be shown by him in an opinion, but should be reserved as matter of argument for the advocate and charge by the Judge, to be passed upon by the jury.

If, in addition to his experience, he has a knowledge of the recorded experience of others, he might also identify and authenticate such records, giving, as he may be well fitted to do, the proper share of weight and authority to each.

We must remember that the rules of evidence, which would seem so to limit his scope, have been adopted as the best means of arriving at the truth. Harsh, therefore, as the exclusion of anything of material importance—at least to the attainment of justice. The innocently accused would not require such aid; nor can history supply us with many—I have not been able to find any—instances in which they have suffered for want of such assistance; while, on the other hand, books both of history and law, from that recording the crucifixion of our Savior, in whom was *found* no wrong, down to the suicide of Mrs. Waters in England the other day, are full of instances of innocents who have suffered from the admission of

opinions to the witness stand. We must not forget that the utter exclusion of everything like these opinions from testimony as not being lawful evidence, is by no means to deprive either party of its use—it is simply to apply to all experts themselves. These certainly, though experts in their profession, would think it a strange procedure in a trial of a case to manufacture invented and suppositious cases to propound to another lawyer on the witness stand, in the hope and expectation of thereby deriving opinions which should influence the judgment of the court and the verdict of the jury. Doubtless the absurdity of the thing would strike others with equal force; but it does not seem to occur to men in general that the ordinary use of experts amounts to the same thing. In the case of the lawyer, with his hypothetical cases of law, it would imply ignorance of law on the part of the Court. Surely, it implies nothing else in the cases involving scientific inquiry. If, therefore, the implication is a just one (and as mankind has but a short life and art is long, it is no reproach), the proper position of the expert, when admitted at all, is as an instructor in the facts of his science, and the laws relating to the same. The opinion which he is forbidden to deliver is that which the jury is to form, under the direction of the enlightened judge, who sits for the purpose of instructing them in the law, after they have heard the presentation of all sorts of cases, hypothetical and other, in the argument of counsel. The exclusion would therefore, deprive the parties, plaintiff or defendant, of nothing, but would simply put that part of the performance in the hands of the proper actors. It would, indeed, do more than this; but all that it could do would be in the way of a more certain and speedy administration of public justice. It would remove from the practice of the law certain reproaches which now cling to that honorable profession. It would prevent the office of experts from being invaded by those who have but the slightest claim to the honors of the professions they do so much to bring in doubt, while it would bring into deserved honor and reputation the men of real learning and

true merit. As the expert is now used and allowed to testify, it is but seldom that men of real eminence are in demand. The person now desired is that one who has the "greatest facility of communicating" his opinion to the jury, who will so deliver it as to favor the side for which he may be called, and by no means that man whose patient research and laborious study has made him the master of his mystery. The latter would, doubtless, make permanent additions to the law and the sum of human knowledge; but he would be a most unlikely personage to depend on for the suggestion of a useful fiction. The probability of this, and the need of some such shelter for the criminal without just defence, has called the other class of experts into being, and the admission of opinions has furnished the means of operation. An oath, and the penalties for falsehood attached, may prevent the manufacture of facts; but opinion is intangible. It is subject to no rules—is pronounced, as it were, on honor, and the proof of utter want of foundation affords no ground for a prosecution for perjury. That this means of escape has been used to the utmost; that, thereby, the sword of justice has been blunted and her arm paralyzed, there is no need of the citation of cases to prove to any citizen of New York. We have already alluded to the manner in which it has been used in proving insanity in the defence of criminals of all grades, from that of murder to embezzlement, and we are justified in the assertion that the scope thus given to the use of expert testimony is dangerous to society. Evils of this kind, fortunately, like any other bad laws, work their own cure. From a serious obstacle to the prosecution it is becoming a laughing stock. Juries are being educated up to the point of having opinions of their own, and now and then startle us with verdicts in accordance with the facts. Soon the revulsion will reach that much to be desired point when the opinion out of place will destroy rather than raise the doubt.

If the revulsion would only stop here one might well be

satisfied with the effect, without too nice questions of the mode of its production; but, unfortunately, this very mode of cure brings evils in its train almost equal to the original trouble. If juries can be allowed to disregard what is admitted by the Court as evidence, because the popular sentiment is aroused against it, there is an end to all fixed rules and established law. There will be nothing left to curb the course of that popular opinion which is as utterly out of place in the jury box as it has been shown, or at least attempted, it is in the mouth of the witness. The remedy on which I would much rather rely will be found in the return to the more stringent application of the rules of evidence, with penalties for disregarding them, whereby a salutary check can be efficiently put to the progress of this evil.

In the foregoing pages I have endeavored to show that it is in no way necessary, either to the cause of justice or the elimination of truth, that an expert should be allowed to give an opinion upon the witness stand. In so doing I have avoided going into the technicalities of the law of evidence, but have given what I may call popular reasons. As an illustration of the completeness with which an expert will combine in one opinion all the functions of witness, advocate, Judge and jury, permit me to quote rather liberally from one now lying before me. In justice to the eminent author, I wish most distinctly to state that I do so without the slightest idea of imputing any improper motive to him whatsoever. I use it as an illustration, fortunately in print, of the extent to which an expert can go, and the many characters that he feels called upon to assume, not doubting but that the memory of my auditors will recall instances of oral testimony on kindred subjects, which, if not so full and comprehensive, were of similar character. I find in the preface to this, the second edition, the following: "The finding of the jury was adverse to the contestants; but it will be seen that the Judge sustains all the legal and scientific points upon which I have insisted in my view of the case." While, therefore, the "finding of the jury" will relieve us of any suspicion of criticising it from any connection with a case

lost by its means, the fact of its "legal and scientific points" having been sustained by the Judge, shows that as a contribution to law on the subject it was regarded justly as of great weight. That in this light it might be proper, and a grateful amelioration of the labors of the Court, there would be no shadow of doubt, did not the perusal of the whole production prove it to be the issue, not of a calm, impartial instructor, but of an interested and partisan advocate. Admirable and rich as it is in stores of learning on the subject of insanity in general, and monomania in particular, it is more like a brief for an advocate retained to prove one James C. Johnson destitute of testamentary capacity than anything else.

Retaining the form of an opinion, it opens with an introduction of the testator, continues with a sketch of his manner of life, antecedents and surroundings, as viewed from the contestant's point, and then, with the certainty of conviction, pronounces him incapable of making a will because of mental derangement. After this, however, he weakens the force of his own dictum by acknowledging the extreme difficulty of giving such a meaning to the word "insanity" as will "cover all possible cases of deficiency or aberration in the mental faculties, and yet not include those instances of cerebral disease which cannot properly be classed under this head," and filling the next five pages with the citation of varying and clashing authorities. The author, however, passes *them* by, and confines *himself* to the one available form of insanity, which in this case he claims was monomania. This, with the utmost distinctness he declares, was the matter with the testator. Sane on all other points but the one of disliking his own nephew; his dislike for him was proof of a monomania that prevented in law his leaving his property to whom he liked. Eight pages of the opinion are therefore devoted to an essay on the subject of monomania, after which, lest there should linger with the jury some prejudice in favor of granting some rights to a monomaniac, he proceeds to afflict him with paroxysmal mania. As, unfortunately, paroxysms imply cessations or lucid intervals, in one of which a will might be made, it becomes neces-

sary to dispose of this difficulty. "Naturally," he says "the next point to be considered is the legal relations of monomania and lucid intervals." Naturally, a lawyer would say, this part of the case belongs to the Judge; but the author of the opinion rises to the height of the emergency, and takes the matter into his own hands. To this end he cites numerous reported cases and decisions, which enable him to pronounce authoritatively that lucid intervals are a delusion and a snare—and, in fact, that there is no such thing. This established, it follows, of course, that the testator could not have had *any*, and, if the logic may be completed, he was at all times crazy, if not always a maniac. After this rather partisan argument he says: "This concludes what I have to say relative to the law and science of monomania, as the same are acted upon and understood in Germany, France, England and the United States at the present day."

"This is *all I have to say*," says this expert, renowned for his knowledge, and with his great reputation, to influence the verdict of a jury. But this is by no means the position which an expert should be allowed to occupy. If it is *all that can be said*, there is no fault to be found; but if it is not, then it is at least reprehensible. The very reputation of such an expert for knowledge and skill in observation would add such weight to such a statement as to make an ordinary jury believe that it *was* all—that the "law" of the case had been fully and fairly stated. The obligations of honor are binding upon the expert to do this—for his only right to give an opinion, or to testify at all, is derived from the belief that he is a minister of the truths of science. In any other view the citation of authorities scarce to be comprehended, and hardly to be refuted by lawyers in a court of law, can be only made for the purpose of darkening counsel and confusing the jury. As an opinion by an expert, written with full opportunity for reflection, and therefore much less liable to be swayed and distorted from the most perfect impartiality than when delivered in court during the heat of a contest, it will be useful to con-

sider closely the one now under examination. If it fails in this respect, what may we reasonably expect from the other?

In the first portion of it the author uses the following expression, inadmissible under all the decisions: "I am entirely satisfied, after a full consideration of such evidence, documents and statements as have been submitted for my examination, that the testator was not of sound and disposing mind," etc. The judicial character of this declaration, which, however, legally destroys the opinion, can hardly fail to be noted. The ordinary inference is that the testimony on both sides had been submitted to him; if not, it is not possible to believe in the impartiality, or attach any value whatsoever to the declaration made. Remembering, however, that this declaration is not made by an ordinary witness, but by one lifted above the common herd—by one selected as an expert—does it not show the danger of giving the power of such utterance to those who may be so unmindful of the ordinary obligations of fairness among men?

The author does not, however, through all his long opinion, give us the slightest proof that he has seen the testimony in behalf of the testator's sanity. Everything of that kind depends on unsupported inference; and yet, in the quiet of his study, he deems he has a right to prepare for utterance the most decided declarations. Let me quote from the second part of his opinion: "The testator had been insane for fifteen years prior to the execution of this will, and his sister was similarly affected. His attacks of delirium were paroxysmal in their character, and in the intervals he would be of apparently sound and healthy mind. Over these attacks of delirium he had, as is common in *insanity* of this *form*, a certain amount of control. When persons before whom he wished to appear to advantage would approach him, he would suppress his *ravings*, but would again break out in them when left alone, or with those whose presence had become familiar to him. At times, too, after becoming thoroughly *exhausted with his delirium*, he would regain his calmness, beg pardon of

those who had been with him, admit the existence of his insanity, and state that he ought to be carried to an asylum."

Now, not to state that, according even to this rather strong statement, the unfortunate Johnston exhibited an unusual power of will and self-knowledge, ought it not have occurred to the expert that he was himself "piling the agony" upon a monomaniac—possibly from one-sided statements by interested persons? The context seeming to bear out the idea that this testimony and evidence was so furnished, ought he not rather to have utterly refused to have given any opinion at all unless furnished with the fullest evidence on both sides? Of this fact, the opinion, as it is professedly a judgment on the law and fact on insanity applied to the case in hand, should have contained abundant and convincing proof.

Up to the point which I have now reached in this "opinion" there has been maintained some slight semblance of judicial tone and style—enough to make one suppose it was intended for a one-sided charge to the jury. From this point, however, it abandons it entirely, and becomes an open partisan argument. That it is an able one, and perfectly allowable to an advocate avowedly retained by one side, can be admitted, though it may well be doubted whether any Court would permit, or any counsel dare to impute motives and feelings so recklessly and positively on so slender a foundation of proof. Not only is this done on slender proof, but the poor man is accused of sentiments of which there is no proof whatever, and which must have been locked up in his own bosom. That he did not act in accordance with such imputed motives and feelings is adduced as proof of his insanity. It seems that the testator had supported a nephew and his wife for many years, but that an opportunity occurring to break up his establishment, he sent both adrift for reasons expressed in a letter which is cited. This act the "opinion" terms the "consummation of a plan which, with all the cunning of a monomaniac, the testator had kept long confined in his own bosom." If the line of argument and logic is correct, it will

be eminently dangerous for any one to bear patiently with a household grievance until the day of delivery arrives.

After a continued preparation for his final effect, in the same strain, the author introduces the will and the directions to the executors *in extenso*. These he pronounces such as no sane person would write. Odd they are, doubtless, but without disparaging the author's judgment and opportunities for forming a judgment, it may well have occurred to him to reflect that there is no source of litigation so fruitful as the testamentary dispositions of ignorant or ill-tempered decedents. A moment's thought would, perhaps, have shown him that there were two sides to the question so positively decided.

Large as is the space which I have devoted to the criticism of this opinion, I cannot dismiss it without referring to the conclusion which is contained in "seven points." Of these the first four relate to the disease of monomania. The fifth repeats the charge that the testator was a monomaniac, and incapable of making such a will as he would have made if sane. The sixth affirms that "there could not possibly have been a lucid interval when the will was written, signed, acknowledged and reaffirmed, because all these acts show a continuance of the delusions under which the testator labored," and the seventh decides "that therefore he was not possessed of testamentary capacity, and that, consequently, the paper dated the tenth of April, 1863, and reaffirmed the thirteenth of September of the same year, is not his last will and testament."

Annexed to the opinion is the charge of the Judge, which, however, does not verify the statement in the preface that I have quoted, inasmuch as in offering to the jury the usual choice of alternatives, he very far fails from sustaining the expert in the last of his "legal and scientific points." This fact, and the verdict of the jury in opposition to the directions and conclusions of this "opinion," tend to confirm me in my expressed suspicion that there was some testi-

mony or proof on the other side to which the author gave no attention.

While confessing that I am puzzled to assign the particular office which this production was intended to perform, I am by no means in doubt as to the lesson which it serves to enforce. If a gentleman of high standing in the community, of large and extensive practice and great acquired knowledge in his profession, will, in the quiet of his study, prepare such an "opinion" for use in a cause involving the mere right to property, in a distant State, what can you reasonably expect of an expert on the stand, where his feelings are enlisted and excited, and the game is one of life and death? How can you expect the impartiality of the pure scientist when the expert is allowed to be summoned as a witness for one side? That he should be allowed to furnish a one-sided brief seems equally out of rule.

If I have thus far—in directing your attention to the relaxation of the rules of evidence in admitting the opinions of experts as testimony, as the cause of evil to society, inasmuch as it introduces an element of uncertainty—seemed to have treated the subject too much from the lawyer's point of view, it is because that point of view ought to embrace all sides. It certainly does not entirely leave out of sight that one which reflects the obligation which the expert owes, not only to society but to those other honorable men, his professional associates, who also devote their lives to the pursuit of scientific truth. As a lawyer, I would exclude his opinions from testimony only to raise them to the dignity of law; I would remove him from the arena of strife as an advocate, and exclude him from the witness stand, that I might raise him to the position of an *amicus curiæ*, owing no allegiance to either party, and only bound to declare the established and demonstrated truths of science for the enlightenment of all. I would elevate the man, and through him the science he professes, by putting him beyond all suspicion of interest, all thought of partisanship, and I well believe the strict appli-

cation of the rules of evidence would effect this in a great measure by removing temptations which now too strongly appeal to the weaknesses of human nature.

As an authoritative recognition that this is the proper position of the expert, at least on the question of insanity, recur for a moment to the statutory provisions of our State thereon, and see if there is any reason, in principle, why this defence, when pleaded, should not be passed upon by the Court, aided by experts summoned by itself, *before* as well as after the verdict of the jury. In itself a statutory defence, its regulation by other statutory provisions could scarcely be obvious to the constitutional inhibition. A trial so regulated would be as much due process of law as any other, and the jury would receive the law of the case on this subject, as well as on the public law, from an enlightened Court, instead of being, as now, compelled to reconcile the opinions of diverging, because partisan, expert witnesses. Let me recall to your memory the recent case of George Francis Train as an illustration. His verdict of acquittal having been rendered on the ground of insanity, and the Court having been certified by the jury, *or otherwise* (for so says the statute as it stands), of that fact, the Court was bound to carefully inquire and ascertain whether his insanity in any degree continued. The Court did so inquire and ascertain, by means, we must suppose, of impartial experts, and did further, as the statute provides, order him into safe custody. Whether he went to the asylum, and if not, why not, Mr. Bell can give us full information. The point is, that in cases of the successful use of this plea, the Court now has a right to retry the accused with the proper assistance of experts, and that on their decision, as the law now stands, depends the liberty of the citizen. As the statute seems to take from the petty jury the right of deciding upon the present insanity of the prisoner, then and there under their personal observation, it becomes matter of wonder that they should be allowed to pass upon that question at all. If they *cannot* tell whether he *is insane*

now, how can they tell that he *was* at the time of the commission of the act charged as a crime? The plea being a confession and avoidance, it would seem eminently proper that the avoidance, when statutory and depending for recognition on scientific knowledge and skill, should be passed upon in the first instance by the same court which, as we have seen, has the power of passing upon it in the second.

If it is objected that in practice the criminal is not bound to declare his special defence until the last moment, the objection can be obviated by compelling him to put in his special and especially statutory defences before trial, and as a correlative duty oblige the State to call the necessary adjuncts to the ordinary Judge to fit him to pass upon this plea. It must be remembered that in theory the plea is always supposed to be interposed in good faith. There cannot, therefore, be any reasonable objection to a course which would speedily verify and sustain it.

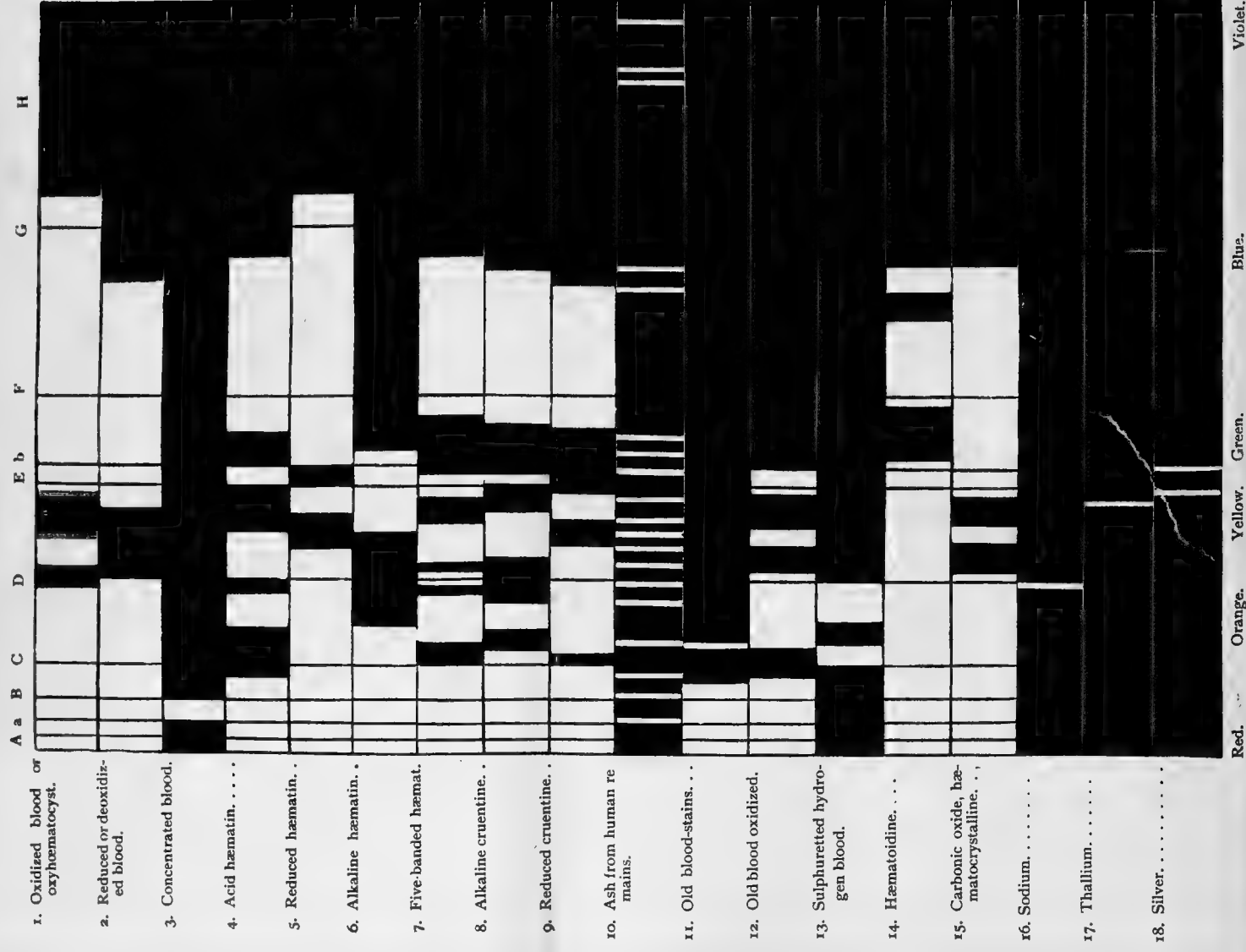
Even now the statute book shows a further approach to a recognition of the propriety of this course, for it is provided that if any person in confinement, *under indictment* or sentence, or under any than civil process, "*shall appear to be insane*," the first Judge of the county, or his substitute, as therein mentioned, "shall institute a careful investigation, call two respectable physicians and other credible witnesses, invite the district attorney to aid in the examination, and, if he deem it necessary, call a jury," with power to compel their attendance; and if the insanity is satisfactorily proven, the prisoner shall be discharged from prison and be removed to the asylum, where he shall be retained until restored to his right mind, when, if the Judge shall have so directed, the convalescent shall be returned to prison to be tried, serve out his sentence or be discharged. In all these cases the provision of the statute applies to insanity proved at the time, evident at the time of the act, or developed in confinement; but there is no apparent reason why the same provision should not be made to apply to the trial in chief before

the ordinary petty jury. As far as it concerns the accused it would seem to be preferable to the present course, though it may be that justice and truth are not always what he desires. At all events, it would be equitable to him and practically beneficial to society, while to the expert—really deserving of the name in restoring him to his true position of scientific interpreter—it would be a rescue from past reproach and constant suspicion.

A popular idea concerning trials at law is that they are all, civil and criminal, simply trials of skill between trained tricksters; that the merits of a cause have much less to do with the decision than the skill of the attorney in preparing his side of the case for presentation to and the power of the advocate in enforcing it upon the jury; that in such cases, as in love and war, all tricks are allowable, and, when they assure success, laudable. As experience has afforded many seeming instances of proof, and as success uniformly brings large profits to the successful practitioner, it is not strange that all expedients conducive to that end have been adopted. This—of the use of expert testimony—has been by no means the least popular. But while I recognize the strong inducements on the part of the ambitious and unscrupulous lawyer for its use, I confess that it strikes me with no little astonishment that members of equally learned, if less ambitious professions, should so readily yield themselves to his service. Nor is my surprise diminished by the knowledge that while nearly every learned profession in the land has at least some sort of organization, no one of them has taken any public step to check the extravagance of those professional experts who play the charlatan in the courts. It is an act which they owe to their own dignity and self-respect, and which cannot be long delayed without the diminution of both the loss of popular esteem and veneration. This, as I have tried to show, the courts may assist them in doing, by excluding opinions and confining these representatives of the learned professions to their demonstrated facts and discoveries; but

the organized bodies of these professions can do more, by making the law of professional honor bear with greater stringency against those who offend against its tenets. When the two shall work together and attain this end, law and justice will be much more closely approached, and the popular regard for them greatly enhanced.

SPECTROSCOPIC ILLUSTRATION FOR DR. WATERMAN'S ARTICLE.



Red. Orange. Yellow. Green. Blue. Violet.

THE IMPORTANCE OF THE SPECTROSCOPE IN FORENSIC CASES.*

BY S. WATERMAN, M.D.,
NEW YORK.

MR. PRESIDENT AND GENTLEMEN: No sooner were the brilliant discoveries, by the aid of the spectroscope, in chemistry and astronomy made known, than the attention of scientific and professional men was directed to the inquiry, Whether the marvellous analytical powers of this instrument could not also be employed in the service of medicine? This inquiry, upon whose solution some of the best minds of the continent were employed, has given a highly satisfactory and affirmative answer, and its adaptation to physiological research will furnish us the material for this evening's consideration.

By means of spectrum analysis we have become acquainted with the laws governing vital processes. By it we have been enabled to lift the curtain, beyond which, since eternity, those mysterious processes were carried on, which man sought continually to understand, upon which the most strange and conflicting theories prevailed, and which he erroneously thought could never be unraveled. Spectrum analysis has carried us far beyond our former conceptions of the laws of life, health, and death, and forensic medicine comes in for a fair share of the information and benefits thus accumulated from the advance of this science. A few years ago it would have been possible to tell you all that the spectroscope could do in forensic medicine in the space of half

* Read before the Medico-Legal Society. April 23, 1874.

an hour; at this present day, the material that has been accumulated could not be exhaustively laid before you in a dozen lectures. Spectral analysis applicable to forensic medicine has become a science by itself, compact, reliable, well-founded, and far-reaching, capable of solving most important legal questions; its application is simple, and it responds to the minutest amount of material. Indeed, it is the extraordinary delicacy and sensitiveness of the spectral test which gives to its application so great a value, and so extensive a scope. It responds distinctly and immediately where the highest magnifying powers of the best microscopes can no longer give us any information; it gives us a valuable reaction for every alteration which blood undergoes when acted upon by physical or chemical agencies; it analyzes the flames of gases, and those of mineral and metal poisons, and unravels the secrets of crime with wonderful alacrity and unimpeachable certainty.

By spectral analysis we understand a scientific process in which light, solar or artificial, is made use of to analyze and to demonstrate substances both organic and inorganic. The instrument employed consists of a system of prisms and lenses, by means of which rays of light are broken up into a series of colored tints, called a spectrum, and which offers to the eye all the colors of the rainbow with great beauty and brilliancy. The instrument thus employed is called a spectroscope, or, if connected with a microscope, a microspectroscope. It is well known what a prism is, and the changes which white light undergoes when passing through it. In the first place the rays, as they pass through a prism, are bent out of their course; they spread fanlike to the right and to the left they disperse, and this we call the refraction of rays. But we witness another and more interesting phenomenon. The white rays in passing through the prism are decomposed, broken up in a number of beautiful tints, arranged in never-changing order, presenting red, orange, yellow, green, blue, and violet. This prismatic band we call a spectrum. We distinguish between an interrupted

and a continued spectrum. When artificial light is passed through a prism, the colored band is not traversed by any lines, and the spectrum is therefore a continued one. When, however, sun, moon, or star light is used, the spectrum is found to be traversed by many lines, and this is therefore called an interrupted or solar spectrum.

In order to see these lines well, we admit the rays through a narrow slit in a shutter leading to a darkened room. In the spectroscope such a slit is attached to one of the tubes.

Newton, although he examined this subject in all its bearings, never saw the sun lines, because he obtained his spectrum by a round hole in a shutter, and the rays that entered overlapped each other and gave him a diffused spectrum. Wollaston described these lines in 1802, but did not understand their importance. Fraunhofer, a learned optician at Munich, used them first for purposes of measurement in 1814. He designated the most prominent of these lines by the letters of the alphabet, from A to H, and they have since been known as the Fraunhofer lines. Kirchhof left us a map of solar lines, a masterpiece of correctness and skill, containing many hundreds of sun lines, and our distinguished Rutherford has photographed them right from the sun himself. The exactness of these two mappings, when compared, is truly wonderful. Angstrom has given us also a most wonderfully correct map of these lines. The orbs receiving their light from the sun have all these lines in the exact position of the spectrum. Fixed stars, like the resplendent Sirius and others, give quite different arrangement of sun lines, and some of the comets give only one or two bright lines, and no black lines at all. Professor Draper, of this city, whose merits in this direction are gratefully acknowledged, has given us a map containing a great number of sun lines, invisible under ordinary circumstances, but which can be made visible under certain favorable conditions; these additional lines can be made visible at both the red and violet part of the spectrum.

The Fraunhofer lines are of the greatest importance in

spectral analysis. Through them we can register any changes we observe in the spectrum, and measure the breadth and the distance of absorption bands from each other. We know now that these lines are produced by various metals in an incandescent condition in the sun, and they can be produced artificially by burning these metals and minerals and comparing the spectra of these vapors. Thus iron, which has a very great number of lines in the sun spectrum, has its most prominent line at E. C, F, and G are peculiar to burning hydrogen. Magnesium yields the C line and the H lines, according to Angstroem, are peculiar to calcium. The D line has a historical significance. Burning sodium yields this line. All the progress in spectroscopy is connected with this line. It is the source from which all the wonderful discoveries in solar and terrestrial chemistry had their origin. This line D, called also the sodium line, can be resolved into two or even more lines by the aid of strong light and the combination of several good prisms. The nickel line lies right between them. The coincidence of the D line with that of burning sodium attracted the attention of Professor Kirchhof, of Heidelberg. There was one thing in this coincidence that he could not at first explain. The sun line, as you see here, is a black line; the line of burning sodium is a bright yellow line, as you see here; yet both occupy precisely the same position in the spectrum. One day, whilst examining a flame of burning sodium, he caused the sun rays to pass through the sodium vapor, and lo! he obtained a black line instead of the bright yellow one. He had found the solution of his query. He at once reasoned that there must be burning sodium in the sun, and that there must be a vaporous envelope which absorbed the yellow line and converted it into a black line. Thus, by a most logical and ingenious mode of reasoning, and by a lucky accident, he demonstrated that these lines had a common origin, and that therefore any sun or stars that gave this D line had sodium in an incandescent condition as one of their constituents. Since then all other

black sun lines have been reversed by various scientists. Thus was the foundation laid for the greatest discoveries of the age, and a new and almost infinite vista was opened into the nature and composition of worlds, of which, a quarter of a century ago, we had not the least presentiment.

Leaving the historical part necessary to our subject, let me say a few words as to the manner of making examinations by the spectroscope.

The solids must be brought to a state of incandescence by heat. We employ for this purpose, where no very great temperature is necessary, a Bunsen burner; where greater heat is necessary we resort to the electric arc, which is capable of fusing every metal known.

When metals are thus heated up to an incandescent state, they emit rays of all degrees of refrangibility. If we examine then the evaporating substance spectroscopically, we find peculiarities in the spectrum enabling us to diagnose its nature. Fluids are placed before the slit of the spectroscope in suitable glass vessels with plano-parallel walls, or we may use suitable glass tubes. When a ray of light is made to pass through these fluids, ere it impinges upon the prism, we observe an absorption of light in various parts of the spectrum, varying, of course, with the fluid employed; they are called absorption bands. Some colored fluids have one or more bands, changing in position, depth of shading, distinctness of outline, breadth and manner of appearance, furnishing landmarks so distinct and permanent that a recognition of a particular spectrum is made easy, even to the man who is not accustomed to use the spectroscope. As sources of light to examine fluids, we use petroleum or oil flames, and where a maximum light is necessary we may employ the oxygen lime-light, the oxygen spirit-light, and at times, with great advantage, the magnesium light. Gases are examined by means of electric induction sparks. Usually the gases resist the passage of these sparks in their natural state of density. We therefore exhaust a part of the gas with the air-pump. We use thin-bored thermometer tubes, with a

bulb on each extremity, into which electrodes of platinum or aluminum are fixed. All other metals would oxidize in the extreme heat generated. The tubes are filled with the gas we desire to examine; the air-pump is then applied until the $\frac{1}{600}$ to $\frac{1}{700}$ part of the ordinary atmospheric pressure is left. In this state of attenuation the gas offers but slight resistance to the passage of the spark, intense heat is generated, and brilliant and beautiful light is emitted, of various colors, changing, of course, with the different gases employed.

Thus no known substance can defy the analytical powers of the spectroscope. Every known gas, metal, alkali, or alkaline earth, when thus acted upon by sufficient heat, gives out light peculiar to itself, producing a spectrum differing from the spectrum of any other known substance. Some substances absorb all the colors of the spectrum, with the exception of a single bright band, of which sodium and thallium give an example; others are readily recognized by a spectrum of many bright lines dispersed all over the prismatic field. Of this, barium, cesium, and rubidium give an example. It is true that the degree of heat employed often modifies the spectra—not indeed as to the position of the characteristic lines and bands of each substance, but as to their number and brilliancy. Thus thallium, for example, gives one green band when evaporated by the heat of a Bunsen burner; but when it is volatilized by the far higher heat of an electric induction spark, we see, in addition, several bright lines in the violet. The same is true of lithium, calcium, and others. But all these modifications are known, and are as much signs of recognition as every other modification can be.

And now let us consider the extraordinary delicacy or sensitiveness of this spectrum test, which by far surpasses any other test previously known to the analytical chemist.

Suppose we divide one pound of our common table salt, the chloride of sodium, into 500,000 equal parts; one of these parts, or minute atoms, we call a milligramme. In order to weigh out such a milligramme it is necessary to em-

ploy the most delicately constructed scales; the weigher himself must possess a high degree of dexterity, and he must proceed with the greatest possible care. But with this performance he has pretty nearly arrived at the limit of possibilities. But what if we should require of this experienced chemist to take one of these milligrammes and divide it again for us into 3,000,000 equal parts? Could he perform this feat? Certainly not. The human mind cannot conceive the minuteness of such an atom of matter. The spectroscope, however, does not recoil from that supernatural task. It demonstrates the presence of such an inconceivable atom with the utmost precision and certainty. The dusting of a book in the remotest part of this hall will set afloat a current charged with sodium chloride, which is present everywhere, and cause a flash in every flame that lights this room, and this yellow flash will yield the sodium spectrum, and thus reveal the presence of this metal.

This sensitiveness of reaction is not confined to the sodium chloride alone. The $\frac{1}{10000}$ milligramme of barium chloride gives a very distinct reaction. Lithium reacts with the greatest promptness to the $\frac{1}{10000000}$ part of a milligramme, strontium to the $\frac{1}{10000000}$ of a milligramme, cesium to the $\frac{1}{2000000}$ part of a milligramme. Thallium, a powerful poison, as well as arsenicum, plumbum, antimonium and nickel, and many others, responds to very minute quantities of material also. This sensitiveness led to the discovery of five new metals, two of which were discovered by Bunsen. He obtained from forty-four tons of the waters from the spring at Turkheim 200 grains of a mixed salt, which the spectroscope showed to be cesium and rubidium.

Interesting as this subject unquestionably is, I must leave its consideration for another more favorable occasion.

THE SPECTROSCOPICAL ANALYSIS OF THE BLOOD.

In the past, and before the spectroscope had entered into the service of medical jurisprudence, the microscope was to a

great extent relied upon to demonstrate the presence of blood; at the same time the chemical arsenal was ransacked to furnish reactions for the detection of traces of blood. Whoever ponders over the painfully tedious and oftentimes faulty proceedings devised and carried out for this purpose, will not fail to hail and appreciate the modern methods of investigation. Chemical analysis is difficult, and often impossible with very minute traces of blood. The microscope can demonstrate blood only within comparatively narrow limits. So long as the blood corpuscle can be obtained, and if it is a solitary one only, if well defined, the presence of blood can be made out; but when, by some chemical or other means, the cell form of the blood corpuscle has been destroyed, when, by a process of disintegration, every trace of its outline has disappeared, when it has lost its characteristics as blood, and is only presented to us in extremely minute proportions as an amorphous substance, as a coagulated, physiologically altered pigment, the highest magnifying powers of the microscope become perfectly useless; it has arrived at the limits of its demonstrating power, and it delivers, without hesitation, the further solution of inquiries into the hands of the spectroscopist; and it is here that its wonderful analytical powers prove of the greatest advantage, and their greatest usefulness in forensic medicine.

In order to fully appreciate these powers we must beforehand know what possible changes may be produced upon blood by chemical means, and in what manner the spectroscopist responds to each particular change; and of these I am compelled to speak in the briefest possible manner.

Nothing is easier than to detect blood by the spectral analytical process; and the $\frac{1}{10000}$ part of a grain of the coloring matter of the blood is sufficient to give distinct prismatic reactions. Gorup Besonez says, whenever the peculiar blood bands appear, the presence of blood is unquestionably decided. The coloring pigment of the blood has been produced in crystalline form, and is known as cruorine, hæmog-

lobine, and hæmato-crystalline. This substance or these crystals possess all the optic properties of blood. Every change that blood undergoes, these crystals undergo likewise; and every modification of the spectrum, which is produced upon blood by chemical means affecting the integrity of the blood, is as faithfully reproduced in solutions of this hæmato-crystalline. These crystals are the true factors in a man's life. Through them the respiratory, the oxidizing processes within the economy, become possible. They are the sole element of the blood capable to absorb and attract oxygen from the air; they bind it loosely, and are at all times ready to part with it and to give it up to oxidizable tissues; and in exchange they greedily absorb carbonic acid, which they meet in the capillaries, as resultants from oxidation, and carry it back to the lungs, to be exhaled as effete material. Freed from carbonic acid, they again absorb all oxygen they meet in the lungs, and by the heart's action this vital gas is carried to every recess of the economy. These crystals are indestructible, preserving their crystalline structure and other peculiarities almost forever; and whenever, in the animal economy, their quantity is diminished, or their integrity assailed, there is corresponding reduction in the capacity for life and health. No putrefactive process can annihilate their integrity, and they can be demonstrated, it is said, in the mummy entombed thousands of years ago. They are double refractors, and possess the highest atomic weight known. Their stability and indestructibility admirably fit them to sustain the functions subserving animal life.

We will find that these qualities of hæmato-crystalline are of the greatest importance in medico-legal cases. When the outer form and integrity of the blood-corpuscles have been destroyed by the various means which the criminal may find within his reach, and when the microscope sends our questions back unanswered, it is yet perfectly practicable to produce the crystals, and the spectral analytic test furnishes us the much-coveted information in full amplitude.

Let me say here a few words regarding the inquiry whether

we are able to tell in a given case whether the blood is human or not. We cannot with our present knowledge and means decide the question in a direct manner. The blood of all animals gives the same spectral appearances; they all have crystalline materials in their blood; even the lowly rain-worm yields hæmato-crystalline which proud humanity has claimed as an exclusive inheritance. But we are not so helpless in this respect as we formerly were. We may at times, by exclusion, give a negative answer. The microscope can tell us, where the size and form of the corpuscles differ from those of man, and whether such blood belongs to inferior animals; for example, the frog's blood; it can also inform us by the peculiar mode of crystallization what it is not. We know that human blood, and that of many carnivorous animals, crystallizes in prisms; the blood of the guinea-pig, of the rat, the mouse, and other rodents, crystallizes in tetraheders; the blood of the squirrel forms hexagonal tablets; hamster blood crystallizes in rhomboheders; and fish blood in fine prismatic needles. We can also obtain a vast deal of information, in forensic cases from our knowledge that the blood of various animals differs in solubility. Human blood solves very readily; the blood of the monkey, the hedgehog and others, solves equally easily. The blood of the guinea-pig, the squirrel, the rat, and other rodents, on the contrary, solves with great difficulty. There is also a great difference in the sinking capacity of the corpuscles; horse blood, for example, possesses the greatest sinking power, forming rapidly a layer of blood-corpuscles in the serum when collected in a glass vessel. Some blood crystallizes readily, others with far greater difficulty. These facts assist us to some extent in inquiries, when we have to pass an opinion on the identity of human blood.

OPTIC RELATIONS OF BLOOD AND ITS CRYSTALS.

When undiluted blood is spectroscopically examined, we observe a dark spectral field, relieved only by a tiny red line at the extremity of the red part of the spectrum. When the

blood is diluted with water, several parts of the spectral field are cleared up in a well-known and regular manner, until, at a certain degree of dilution two absorption bands become visible, arising out of the darkness at the orange and green part of the spectrum, between the Fraunhofer lines D and E. These are the bands given by oxidized or arterial blood. Examine them well. The first band, near D is narrower than its mate, and darker; it is very distinct also in its outlines. The second band is broader, but less dark in color, and its outlines are blurred. When the process of dilution is carried further, these bands become paler, contract somewhat, and finally disappear. Oxidized or arterial blood has this two-banded spectrum from beginning to end, and presents no other modification; nor is there any substance known that will present the same spectral phenomena.

When the blood is deprived of its loosely bound oxygen, which can be done mechanically by the exhausting pump, or chemically by reducing agents, as we call them, such, for example, as ammonium sulphid., tin oxydul and others, we immediately witness a change in the aspect of the spectrum. "A change comes over the spirit of its dream." The two oxygen blood bands disappear and make room for a broad dark band, occupying the space between D and E. This band is called the reduction band or band of Stokes, who first saw and described it. Blood deprived of its oxygen is called reduced or deoxidized blood. It corresponds to the venous blood in the animal economy. We must, however, not suppose that reduced blood is tantamount to altered blood, for all that is necessary to restore its two oxygen bands is to shake the blood or the hæmato-crystalline solution up with air, or add some substance that will give up its oxygen to the blood. This process can be repeated many times with the same results. Remember these facts, for they are of the highest importance in the analysis of blood. Suppose we were called upon to analyze a specimen of blood, and we find it cannot be reduced by these means, would you not at once perceive that such blood must have been acted upon by some powerful agent,

destructive to its functional integrity? Such an effect will be produced upon blood by carbonic oxide, by nitrous oxide, prussic acid, and other irrespirable gases. If a question should arise, whether a person died from asphyxia, I think we can satisfactorily answer the question by aid of the spectroscope. Where there are not any external signs of violence, the question is reduced to this: Is asphyxia the result of poisoning with irrespirable gases or not? Formerly, and even now, where experts are not fully up to the progress of spectral analytical processes, great stress was laid upon the dark color of the blood, engorgements in the lungs, arteries, and veins, and other like symptoms. We have learned by experience that these symptoms are far from being conclusive or characteristic, and they ought never to have any undue weight in a court of justice or in criminal proceedings, for we find the dark, sticky, or black fluid blood, and engorgements in lung, liver, spleen, veins, and arteries, in many diseases, as pathological results, such as in narcotic or alcoholic poisoning, in cholera, in yellow fever, and septic diseases. Often, indeed, the phenomena of suffocation during life offer no specific marks, whatever may have been the mechanical causes producing it; and we find also often no characteristic post-mortem changes in the organs, because of the short duration of the violence employed, admitting of no demonstrable anatomical change to take place; in the blood, however, can be found the record of the characteristic changes peculiar to death from suffocation. When we find the blood of a person that died from asphyxia responding to the action of oxygen, and to the reduction test, we can safely say that he has not been poisoned by irrespirable gases. But when the reduction cannot be effected, consequently the blood is no longer in a state of integrity, it is also perfectly safe to say that the asphyxia is due to the action of some of the irrespirable gases, or some other poison, and we shall by and by show that the spectral test enables us to decide what particular gas or poison has been the cause of the asphyxia in a given forensic case.

When blood or a hæmato-crystalline solution is acted upon by any acid, except prussic acid, or by an alkali, or by alcohol, chloroform, and some other agents, it is split up, or chemolized, as we term it, into albuminous substances and a coloring matter which contains all the iron that is contained in the blood, but none of the sulphur of the original compound. This is hæmatine. It is important to remember this fact, for, as you here see, hæmatine is the product of decomposition or chemolysis, yet many text-books still repeat the error of the past, which called the undecomposed coloring matter of the blood hæmatine.

Hæmatine and its compounds can be crystallized. If a hæmatine solution is placed before the spectroscope we obtain a band peculiar to this substance, and quite distinct from the oxide blood spectra. There are a number of hæmatine spectra; the modification depends upon the agent that has been employed to separate hæmatine from the original compound. We here present some of the modifications.

Hæmatine has strong affinities for oxygen, also for carbonic acid. It can subserve, therefore, the processes of life to some extent, far less energetic, however, than hæmato-crystalline. It can likewise be reduced by reducing agents. The spectral bands of reduced hæmatine, as you can readily see for yourself, offer great differences from those of Stokes' band of hæmato-crystalline.

Hæmatine is found in the human economy in disease only, especially in Addison's disease, in which the suprarenal capsules are affected. When it is therefore found, we know at once that it is the result of pathological conditions in the blood.

The one-banded hæmatine spectrum, resembling somewhat the band of Stokes, is produced by the action of potassium alcohol upon the blood. A comparison will show that this band is situated so as to have the D line for its centre, it is less broad than Stokes' reduction band, which stretches from D to E.

There is a five-banded hæmatine spectrum resulting from

the action of acidulated alcohol upon blood. Here is a four-banded spectrum, produced by the action of sodium sulphate neutralized by acidified alcohol given by Dr. Thudicum.

A new substance has also been obtained by Dr. Thudicum, from blood, called cruentine. It has also quite a number of spectra. Cruentine can also exist in a double state of oxidation, that is to say, it can be oxidized and deoxidized at pleasure. A few of these spectra may be seen on the diagram. Be pleased to compare now all of these spectra, and you will find that they differ from each other quite sufficiently to make a mistake nearly impossible. In very doubtful cases we may resort to actual measurement; means to this end are provided for in all good spectrosopes. You will agree with me, that the harvest which the spectroscope has gathered in the analysis of blood is very abundant, and of the highest importance in forensic medicine.

The man who is called upon to act as an expert in medico-legal cases must be familiar not only with the chemical or microscopic test, but ought to possess a thorough knowledge of the various spectra of blood, and no blood analysis ought to be considered perfect and beyond assailability, which ignores or is not verified by the revelations of the spectroscope.

Having placed before you the most interesting optic changes to which blood can be brought by chemical as well as physical means, we are now well prepared to understand how this analysis can be utilized in the detection of crime.

The "man of blood," after he has committed his deed of darkness and death, what is he most likely to do? The history of medical jurisprudence is full of information on this head. He will naturally try to efface the traces of blood, the terrible "tell-tale drops." For this purpose he will use almost anything at hand; water, soap, alcohol, acids, alkalies, oils, and others. But science can foil him in his efforts to evade the consequences of his crime. The indestructibility

of the hæmato-crystalline leaves traces and landmarks perfectly intelligible.

We can call down as witnesses and as judges the fiery messengers of heaven to lay bare his deeds of blood, and as the genial trembling sun ray filters brightly through the analyzing prism, it reveals to us the presence of blood, it tells us even of the means he has employed to efface his crime. Light and science are the terrible avengers from which he can never, never escape; they follow him with never-tiring step, until they grasp him in their toils and give him over to justice and retribution.

When the blood itself is found, even in very minute quantities, upon the floor, the wall, the clothing, the instrument of death, its demonstration by the spectral analytical method is perfectly easy and reliable. We scrape the wood, the wall, the weapon in order to collect all the traces we can, then we dissolve it carefully in a few drops of water, perhaps add a trace of ammonia, and submitting it to a micro-spectroscopic examination we will get a definite optical reaction. If maceration has been used, we still often obtain sufficient blood for spectroscopic analysis to establish our case. Where boiling has been used, the hæmato-crystalline has been coagulated, for it is simply a crystallizable albuminoid, and in this state it will not give any longer the two blood bands at D and E. We must then act upon the coagulum with acids, and try to obtain the hæmatine spectrum. Where acids, alkalies, soap, alcohol, and other agents have been employed, we may obtain the hæmatine of the cruentine spectra, and thus demonstrate blood. This has been done successfully in several very interesting medico-legal cases on the continent. In these examinations the spectroscope renders us the highest possible service, whilst the microscope is unable to give us any response whatever.

But with these services its usefulness in this direction is by no means at an end. When blood is acted upon by heat and acetic acid, minute crystals, table-shaped, are obtained,

known as hæmine. They can be obtained from hæmatine also. The crystals have frequently demonstrated blood from very scanty traces. Here the microscope again becomes useful. It does not, however, at all times crystallize readily. Under the spectroscope hæmine gives a band far out on the red part of the spectrum, where we meet also one of the bands of chlorophyl; it lies at C.

Another substance found in old extravasation of blood within the economy was described by Virchow and named by him hæmatoidine. It is probably modified hæmatocrystalline; its peculiar and characteristic spectrum has been given by Preyer. It is of value in forensic medicine to determine whether an extravasation of blood, found at post-mortem, is of recent date, or has been there for some time.

The spectrum of hæmatoidine is here shown; it is a chloroform solution of hæmatoidine; its bands are found in the blue and violet part of the spectrum, one well-marked band between C and F, and another between F and G. They require the maximum illuminating power, magnesium light or that of oxycalcium light.

Spectral analysis will also assist us to determine in forensic cases whether blood spots found upon wood, stone, furniture, clothing, weapons, plaster-of-paris, walls, are of recent date or old. This inquiry has come up recently in Boston, in the well-known case of Alley, who stood before a jury charged with murder. The State medical expert stated in his direct medical examination that old blood spots could not be distinguished from blood spots of recent date. I have published my views in Dr. Brown-Séguard's Archives of Scientific and Practical Medicine, No. 5, and I think I have proved that the expert fell short in his testimony, and placed himself at variance with the accepted and exact results of spectral analysis.

When a solution of old dried blood is prepared and properly concentrated and spectroscopically examined, we behold one black band coincident and overlapping the C line. The

rest of the spectrum is all dark. I have shown you, this is not the case when fresh blood is examined; then you find simply a red band near C. This absorption band at C is characteristic of old blood. Having seen and examined this band, and diluted our solution with about fifty per cent. of water, the spectrum clears up and gives us in addition to the band at C our two cheerful bands, so well known and so often alluded to, but yet beyond these three bands the spectrum is still overcast. Let us set our solution aside for twenty-four hours and then examine it again, and note the remarkable and characteristic change that has taken place. At first, when only one band in red was visible, and all the rest of the spectral space covered with darkness, it seemed as if the hæmato-crystalline had lost its power to absorb oxygen from the air; it seemed as if by age a complete necrosis or death of the blood had ensued; but now, behold! the two cheerful bands betoken a resurrection from death, typical and beautiful to behold. A further dilution brings out these bands in all their old, bold outlines; but the band at C disappears gradually and is seen no more. Set your solution aside for another twenty-four hours in a closed vessel, and then examine spectroscopically. You will find the three bands have disappeared, and you now behold the broad reduction band between D and E. What has caused this change? I will tell you. Your solution has entered a putrefaction process, evolving sulphureted hydrogen and other gases of decomposition, which in their turn, have consumed all oxygen. You have indeed a fair specimen of reduced oxyhæmato-crystalline before you.

To show you that this is precisely the case, take your solution and shake it well up with air. On spectroscopic examination you will find that the reduction band has disappeared, and our old welcome oxygen bands have reappeared between D and E. They look as beautiful and as well defined as ever. What has now taken place? Simply this: your blood solution has again exercised its life function of uniting with the oxygen of the air, the deoxidized blood has

become oxidized, it has saturated itself with the state of life, showing that after long years of death apparent, the hæmato-crystalline has preserved its integrity and its capacity to renew its vital mission when brought again in proper condition.

We have now seen how, by the aid of the spectro-analytical process, we can demonstrate blood, when altered in almost any possible way and manner, and that we have the advantage over the criminal in his efforts to hide his crime. But how, if he has resorted to fire to burn up his victim? Can the spectroscope help us then? It can, gentlemen. I present you here this beautiful spectrum of many light and dark bands. It is the spectrum of ash from human remains. To see this spectrum well the ash is moistened with a little diluted chloric acid and then exposed to the heat of a Bunsen's burner, or acted upon by an electric induction spark. A very ingenious apparatus has been invented by Mitscherlich. In a narrow glass tube, closed at one end, and the other end bent to a right angle, is placed the substance in a fluid condition which is to be analyzed. The open end is filled up with a bundle of fine platina wires, properly secured. By means of capillary attraction the fluid in the inverted tube is sucked up, and is consumed rapidly, heat being supplied by a Bunsen's burner or other means. As the metallic or mineral solution is thus consumed, their spectra can be quickly and enduringly observed and studied. There is another very ingenious apparatus, invented by Becquerel, which I shall describe presently, and another, a very beautiful apparatus, invented by our countryman, Dr. Morton.

The spectrum from the ash of human remains is one of the most beautiful we can behold. It is not, however, a simple spectrum, but a combination of several spectra. This also is of great practical value in spectral analysis. In the present case the spectrum is made up of six different spectra, which are readily pointed out. They belong to so many elements found in the human system, to wit, sodium, potassium, lithium, cæsium, rubidium, and calcium.

We learn, then, from the ash of human remains, that there are six metals in its composition; iron and magnesium do not appear in this spectrum.

POISONS.

All poisons, except a few vegetable narcotic poisons, and their alkaloids can be discovered by the spectral analytical method. The spectral relations of a number of vegetable poisons and their alkaloids have been studied, but those of many others are still awaiting investigation. Spectral analysis is but a decennium old, is therefore yet in its infancy, and it has not therefore accomplished all, within the range of forensic medicine, that it may accomplish in the future.

When called upon to analyze a metal or mineral poison, we must bring it to a high state of incandescence by a Bunsen burner or by the electric arc. You have all heard of the manufacture of Bessemer steel; by this process several tons of cast-iron are converted into cast-steel in less than twenty minutes. In this process oxygen is employed in order to burn out all the carbon and all the silicon of the cast-iron, and the heated gases issue forth in a flame of the furnace. This flame varies in appearance, as the carbon and silicon disappear, and it is of the utmost importance to know the exact moment when all the carbon and silicon is burned out, otherwise the entire cast is lost. The spectroscope will point out when this exact moment is reached, by a peculiar spectrum from the flame, when the access of oxygen to the mass must be cut off. Our procedure is similar. The spectroscope analyzes the flame of each metal and mineral, and gives us the peculiar and characteristic spectrum of each. Good chemists know these spectra well; the spectroscope has become an indispensable aid to them to determine the nature of metallic ores and substances, and in every well-arranged chemical laboratory you can find charts containing the spectra of the various metals and minerals.

The salts of metals, too often used for poisoning purposes

are given or taken in fluid form, such as arsenious acid, corrosive sublimate, antimony, lead, copper, and others, and we are called upon to demonstrate them from the organs and tissues of the human economy. Here we must proceed in a different way. A considerable number of these salts may be recognized at once, according to Thudicum, by holding a small piece of the tissue into the colorless flame of a Bunsen burner; the flame is analyzed by the spectroscope; or we may place the fluid in Mitscherlich's apparatus; or, still better, we may employ the apparatus devised by Becquerel, consisting of a series of glass tubes into which the positive and negative electrodes of a powerful electric battery are introduced. The electric discharge passes through the liquid we desire to analyze, and as the induction spark passes from pole to pole, the substances are evaporated which are present in soluble form in the solution. The effect of the inductors can be so regulated that the interruption of the current, and consequently the electric sparks follow in such rapid succession that the spectrum becomes quiet and almost stationary, the apparatus works uninterruptedly for hours like a heating apparatus; for, during all this time, with the substance we desire to analyze under these favorable conditions, we can quietly observe the steady spectrum, and ascertain by it the nature of the substance to be analyzed.

The time allotted to me precludes the possibility to go into a more extended detail. Becquerel's apparatus is well described by Becquerel himself and by H. Schellin in his work on spectral analysis.

Viewing, then, the progress we have made in this direction it is to be regretted that in the Wharton trial the analytical powers of the spectroscope were not brought in requisition. This trial has shown us the wonderful mystification of the old analytical methods. The contradictions were disheartening and humiliating to the medical profession. There could not have been an assailable point to the answer which the spectroscope would have given to the question whether the substance found was arsenicum, antimony, or gelsemi-

num. The possibility to work with minute quantities would have made it convenient to observe the spectrum for many hours, and would have given an opportunity to many to verify and observe the revelations of spectral analysis.

POISONOUS GASES.

I regret that time enough is not at my disposal, and that, therefore, I can bestow but a brief consideration upon the usefulness of the spectral test in cases of poisoning with irrespirable gases. Of these, poisoning with carbonic oxide or charcoal gas happens most frequently. Whether in a given case this gas has destroyed life, or whether suffocation from other causes has taken place, will often be a question for the medical jurist to decide. The facility with which it is generated; the certainty with which it acts its fatal results upon the animal economy; the gradual and gentle manner with which it creeps over its victim, producing effects upon the brain, rather agreeable than otherwise, until the entire blood mass is saturated with its treacherous vapors, and the sleep of dreams passes insensibly into the sleep of death; the facility with which traces of this gas can be removed by simply admitting fresh air into the chamber of death; the absence of disturbing influences upon the corpse, all these circumstances admonish us, that to detect poisoning with this gas we must avail ourselves of science's most advanced resources. The post-mortem appearances of persons destroyed by this gas are by no means characteristic. We find the blood of a purple-black color, engorgement of arteries and veins, clots in the heart, and other changes in the lungs, liver, and other organs; but these are found in many other diseased conditions also, and are by no means peculiar to poisoning with carbonic oxide alone, and every intelligent jury would hesitate to render upon such feeble testimony, a verdict of death. Carbonic oxide gas, as well as all other irrespirable gases, exerts its destructive force upon the blood specifically; it alters it in a manner that it becomes unfit to

carry on the vital processes, and it is therefore but logical to suppose that we must find in the blood the traces of this poison.

And so it is indeed. We have spoken of the crystalline material of the blood, of its being so eminently adapted to the purposes of life, we have admired its many wonderful qualifications and its beautiful spectrum ; but this substance has its weak points also. It has the most fickle disposition imaginable. Oxygen is its natural companion, so also is carbonic acid ; but it runs away with many of the irrespirable gases like a fickle woman with a preferred lover, without remorse or compunction. It unites with peculiar energy with these poisonous gases, and forms combinations and unnatural alliances with them so firmly and tenaciously that a subsequent separation becomes almost a matter of impossibility. So firm is this unnatural union, that they go together even through the crystallizing process, and we are able to procure crystals of all these combinations. No wonder, then, that we hail with satisfaction the performance of the spectral analytical test, by whose aid we are able to determine and detect the agent that causes asphyxia.

In the case of carbonic oxide two bands, very much resembling the two oxygen blood bands between D and E, are seen. On exact measurement, however, we find differences in position. But when blood saturated with carbonic oxide is acted upon by reducing agents, it is found that they have no power of reducing it. The broad Stokes band cannot be produced. This irreducibility is by Gamgee considered decisive in forensic medicine, showing that death has taken place from the inhalation of carbonic acid gas. But we have no other means to show this irreducibility than by the spectral analytical process.

PRUSSIC ACID.

Hæmato-crystalline has the same fatal affinity for prussic acid. We find the blood of a brown color, and the peach-

blossom smell is so decided, especially immediately after death, that we may conclude without spectroscopic examination that death has resulted from prussic acid. It is, however, a singular fact that this subtle poison does not decompose hæmato-crystalline into hæmatine. We possess ample means and optical phenomena to decide the question of poisoning by this gas by the spectral analytical test. It is an interesting chapter indeed, but its details must be passed over this evening.

SULPHURETTED HYDROGEN.

Concentrated sulph. hydrogen gas, when inhaled, is a rapidly destroying poison to animal life. It has been used for homicidal purpose. If a stream of this gas is passed through a blood solution, it rapidly causes the hue of the blood to change into a dark brown color. Experiments made by Hoppe Seyler upon dogs and rabbits show the terribly destructive effects of this gas; even when mixed with twice its volume of oxygen it produces fatal consequences. The rehearsal of the symptoms is painful to listen to. The dyspnoea and convulsions are fearful in character, the glaring, protruded eyes, the distortion and paralysis are rapidly produced. This gas is around us; it is generated whenever animal or vegetable matter undergoes putrefactive transmutation; it reaches us from our defective closets and ill-conditioned sewerage. If long inhaled, even in smaller quantities, it creates zymotic disease, favors septic processes. The latest investigations claim that the sulphur is separated in the economy, favoring coagulation and the formation of embolic material.

The action of sulphuretted hydrogen upon the blood cannot be definitely and absolutely proved by chemical means, and in forensic cases its action can only be fully and satisfactorily substantiated by the spectro-analytical test. Blood saturated with this gas has its definite spectrum. It is the band in red, of which we have already spoken as being pe-

culiar to old blood stains, and it is possibly the action of this gas, which is evolved during the process of drying up, to which this band owes its presence, and which betrays its evanescent character when such blood is brought to a state of watery solution, and then exposed to the vivifying effects of oxygen.

But how is it possible to introduce this offensive gas into the system for criminal purposes? It may be injected into the rectum and intestines, where its action would be as deadly as if inhaled by the lungs, and yet we would not find any direct evidence of this gas in this organ.

PHOSPHURETTED HYDROGEN.

Like the foregoing gases this gas is also highly poisonous; animals exposed for a very brief period die, even if they afterwards have been exposed to fresh air and oxygen. Its presence can be readily detected by chemical means, through the breath of the animal. A paper moistened with a solution of nitrate of silver held before the mouth of an animal thus poisoned will show the formation of silver phosphate.

It acts equally poisonous when injected into the rectum. The prismatic test shows the presence of this gas by peculiar and characteristic modification of the spectrum, aided by certain chemical reactions, and this test may be employed whenever the chemical tests are doubtful or unattainable.

I have to pass over the action of anæsthetics and their peculiar action upon the blood, and also the *resumé* of what progress has been made to detect by spectral analytical methods the presence of alkaloids, such as strychnine, morphine, veratrine, atropine, and many others. It would require far more time than we have this evening. Perhaps I shall have an opportunity to speak to you on these subjects at a future occasion.

I have thus laid before you an outline of the utility and importance of spectroscopic analysis in forensic cases.

I hope I have in some measure justified the interest you

have taken in the subject. I hope also to have been able to impress you with the great responsibility resting upon the medical expert who is called to decide in cases of life or death.

There is no doubt in my mind that many a life has been sacrificed by medical testimony, lacking the breadth and depth and the foundation of true science. I have still less doubt that many a hardened criminal has escaped conviction and well-merited punishment, from a deplorable ignorance of scientific facts, which now are happily at our command. It is evident, and held so by the best physicists abroad, that no blood examination is perfect and unassailable that is not verified by spectral analysis, and that no conscientious verdict should be given, and judgment of death pronounced in cases of poisoning, without the positive proofs attainable from the same source. If I mistake not, the aim of your Society is improvement of medico-legal knowledge, in conformity with the spirit of scientific progress, and I have no doubt you will see to it that the exceedingly important information, which in an imperfect sketch I had the honor to lay before you this evening, shall not be discarded in the courts of justice where your influence extends, alike important to the accused as to society and the State. If I have by my discourse thrown any light on the modern mode of investigation, and stimulated you to renewed efforts, I shall be amply repaid for my labors.

THE RIGHTS OF THE INSANE.*

BY JULIUS PARIGOT, M. D.

Two very important questions, one of fact and the other of law, are brought into connection with the forced seclusion of insane patients in so-called hospitals or asylums where no medical treatment is employed. In this brief paper it will be attempted to prove that the rights of the insane are in such cases violated, and that the remedy to such an evil lies in the proper amending of the law in order that a legally authentic record would prove the necessity of appropriate medical treatment for each patient.

No one denies at the present time that many vital questions of justice, legislation, social economy and finance, are involved in the treatment of lunacy. Still, many persons are not aware of the moral obligation devolving upon every citizen to guard the operation of the law under which the seclusion of persons who are insane, and of those who are supposed to be so, takes place, in order to avoid any possible false accusation about the legality of such an act; also to see how the provisions for their care are prepared by boards of trustees or governors; and, finally, to vindicate the rights of those who cannot defend themselves.

What seems to be positively overlooked is the importance and value of medical treatment, as well here in the whole of America as in England and elsewhere. Now, we may read in *The Journal of Mental Science* the following remarks, showing what is going on in England:

These reports (blue books) show that, on the whole, there is an immense

* Read April 23, 1874.

amount of thought, and care, and effort, exercised in the treatment of the insane by all who have to do with them. Year by year the efforts toward a more perfect system of treating and managing them seem steadily to increase in all but one direction. That spasmodic and individual efforts are made in this direction is true, but on the whole the medical treatment of the diseases which are comprised under the term insanity stands still, as compared with the asylum building, general managing, etc. * * * * Three books about a disease with nothing medical in them! Everything that concerns the treatment of those laboring under this disease professedly gone into, and not a word about medicines! Talk of modern skepticism—the reports of the commissioners and reporters in lunacy are the finest examples of medical skepticism extant; for they don't deny, deride, or damn with faint praise—they simply ignore the whole science and its professors. It may be that this will be better in the long run for the medical treatment of insanity, but it is hard to see it if its practical effect is to encourage asylum doctors to ignore the medical aspects of patients, and sink into a state of lethargic indifference to the unsolved problems in brain pathology, diagnosis and therapeutics, that daily come before them.

The editor, Dr. Maudsley, does not pretend that no scientific progress is attempted or made in public or private asylums. It is admitted that in America we possess many asylums in which men of great merit open and follow new roads to scientific progress. Many institutions might be mentioned in which such efforts are made, and we of the medical profession may congratulate ourselves over the spirit which animates these scientific pioneers. But if we consider only the individual interest of each patient who is immured in an asylum where a positive medical treatment is impossible, and if, with Dr. Maudsley, we sum up the results of a non-therapeutical practice (brought on by the medical skepticism of administrative boards), then we may see the need of amendment of our laws on this subject. Evidently there is a confusion in the given powers and qualifications to serve the people in this matter. No by-laws should exist in opposition to State laws; and if that were so, medical responsibility would have fair play to show what it might do when supplied with everything necessary for its scope and our benefit—the recovery of the patients.*

* State or chartered institutions should have no more privileges before the law than other institutions for the insane; all should be positively submitted

Not the custody, but the cure of the insane should be the sole object. Such reform of the law, if I am not mistaken, is the *res vestra agitur* of such an association of lawyers and physicians as this. Common efforts would bring at last an immense benefit—namely, that insane patients must be cured, and not be considered, *prima facie*, as beings to be put in custody for their lifetime. Certainly such necessity overshadows all secondary questions of housekeeping details and comfort, though important they are. In general economy principles must be adopted which infallibly must lead to practical results, as in commercial affairs or in industry. Is it not established that a sufficient capital must be embarked to obtain profitable products? It is the same in our case; an adequate, well-paid staff of physicians would take care of patients, employ all their skill and ingenuity to empty those immense reservoirs of human miseries, and free us of that constantly increasing number of insane, and of the enormous expense we are obliged to bear.

How is it possible that two, three, or even four physicians can take proper care of, and study the particular cases of four hundred, six hundred, or sometimes one thousand patients, shut up in one asylum? We believe that a physician having charge of fifty patients has as many as he can properly take care of, with the view to cure them.

to inspections, either of Commissioners in Lunacy or members of the State Boards of Charities. And any interested party should have free access to the records.

In order to give an idea of what is considered the best general plan of an asylum, we refer to the Medical Register of New York, 1873-74, page 138, in which will be found the so called advantages of a new *State Asylum*. Among numerous *apartments* will be noticed the Steward's and the Matron's, with offices, reception and store rooms; but there will be found no physical and chemical laboratory—no lecture room—no clinical wards—no place for anatomical and pathological researches—no rooms for scientific collections—no private apartments for the physician—no private study. The programme boasts of a better opportunity for classification—"by separating more completely the various classes from the *quiet* to the *most disturbed*." Here, again clinical instruction is positively denied, or, at least, positively ignored, by both trustees and physicians!

Far from such rational and practical method, what do we see in almost every country? Honorable Boards, meaning well in their own and the generally adopted views, intrusted with legal and administrative powers to do with the insane what they think best, without control. Now, the most moderate and respectful criticism has shown the inefficacy of the means the Boards put in the hands of their physicians; nay, sometimes such Boards think they must diminish the number of medical officers, lower their dignity, or even not give them any remuneration. It may easily be understood that in such general circumstances, physicians must do their best to please the narrow views of those in whose dependence they are placed; eventually they will even defend that system, and neglect their duties, as *The Journal of Mental Science* has shown to be the case. We need in this country something higher and more independent. We want a law which everybody must obey and by which the medical profession shall become responsible for its acts. Unfortunately we have a legal mechanism unfit to serve the interest of the people. Even the latest law and the recent act concerning the State Board of Charities and the Commissioner in Lunacy, are full of errors, contradictions and embarrassments that prevent the aim being reached.

If our asylums are made for the cure, and not for the perpetual custody of patients, why should a law not say so? Why should administrative functions surpass the legal and medical ones?

A responsible head physician, having for principal object science and the medical treatment, ought to have a sufficient and competent staff around him—a staff furnished with the necessary instruments, material and moral, to cure the patients. Anatomical and chemical laboratories and lecture-rooms should be provided and well furnished. We should have less of balls, billiards, and magic-lantern exhibitions as necessary to cut the monotony of asylum life. This chief physician ought also to be intrusted with the power of admitting or rejecting affidavits concerning the mental state of a so-

called insane person ; and be free (nay, the law ought to command it) to discharge a patient when cured, or sufficiently *compos mentis* to have a trial to resume his position in society. No intervention, either administrative or judiciary, appears here necessary. The responsible physician must be the conscientious expert and judge of such cases, and possess the power to fulfil his mission. If a too-absolute power could be feared, let, then, the superintendent have such jurisdiction only when in council with his medical assistants or his consulting physicians. Such a measure might also serve to curb too free a use of administrative authority on the part of head physicians.

When we consider the important relation of the subjects under consideration, we may wonder that superintendents of asylums are not made (*de jure*) members of the Board of Health of their county. They would complete that Board whose functions embrace as well the conditions of mental as bodily welfare. The Hon. Dorman B. Eaton explained lately at the New York Convention of the American Public Health Association, why a Board of Health determines its own sphere of action, makes the bills by which its own action is legalized, issues summons, sits in judgment, and uses its own officers to carry its decisions into effect. Evidently the sanction of such power must be the immediate benefit felt by the public at large.

If we inquire into the laws and customs relating to the insane in past and present times, it is very curious to find that, on account of, and in order to prevent, accidents caused by "furiosi," maniacs, etc., measures are taken against them, but that not a single word is to be found in favor of their rights as citizens of a civilized community. Nothing but the oblivion of human rights, or the fear, contempt, and possibly the degradation of the poor patients, can explain such fact. Even in the country of the celebrated Pinel, a curious instance of public neglect of human dignity is found in the text of a law (Aug. 24, 1790) which assimilates the insane to dangerous wild, rambling animals. It is against that want of feeling,

against the absence of principles of justice, that we should urge reform. Let us ask why a law should not protect the life and dignity of the insane? why it should not punish those who violate their rights?*

Let us consider the result of an obligatory legal compulsion for treating the insane medically. A law on the obligatory medical treatment of insane persons confined in public or private asylums, has for its objective basis an inviolable right and a social duty, out of which we may expect, first, the almost certain cure of every patient; secondly, the positive diminution of an evil which attacks principally the moral and educated classes of society; and thirdly, the benefit of the better health (moral and physical) of the community. It is very easy to show why the insane are entitled to the best medical treatment when secluded from their friends.

If, in the interest of society, the insane may be temporarily deprived of their liberty, it is but a preventive measure, just and acceptable in certain conditions, out of which a positive right must be acknowledged, namely, that the law which forcibly isolates or secludes a patient from his friends and family assumes, *ipso facto*, the responsibility of a real and scientific medical treatment. A public convenience or a public right can never include the violation of an individual one, or the non-accomplishment of a duty, such as must be the case if an insane person is secluded in an asylum, unprovided with what is necessary for his or her recovery—in an institution where the number of physicians is quite inadequate to the work to be done. Even were there sufficient medical attendance for ordinary emergencies, we must allow for the peculiar interference of State officers, as

* Evidently a civil law, protecting the insane, does not mean an interference with the feelings of love and duty in the family circle. Families are free to go beyond the law, but not to the extent of proscribing the general law, which insures to everyone in his right mind the use of his own property. Such law means the consecration of individual liberty and autonomy, in consequence of which she takes upon herself to care and provide for the patient when himself or his family cannot do it. In one word, the law represents a social obligation which does not prevent, but rather encourages, the moral law of family ties and support.

the Governor, the Attorney-General, Courts, etc., which, at times, prevents asylum physicians from performing the duties they are paid for, since they are often employed on outside commissions, legal or scientific. The remedy for this evil is obvious; the law should prohibit any judge or lawyer to subpoena an asylum officer to outside cases. Of course, when thus employed, the observation of a patient and his individual treatment are stopped at once, and in such case the remaining officers, having their usual duties also, must neglect the one or the other. Trustees consent to, or are obliged to permit, such irregularities, and the poor abandoned patient (outside of the reach and influence of his friends) is thus deprived of his unquestionable right to treatment which may save him from an incurable issue of his malady.*

An individual treatment so desirable for the patient, substituted to a sort of wholesale enterprise of keeping, would even be profitable to our public charities. The mistake of these economic Boards is patent.

Certainly, nowadays, as far as general treatment goes and material cares are concerned, the insane are better treated than heretofore. They are taken to beautiful institutions, where however, unhappily, economical laws are supreme, and, we might presume to say, irrationally applied, since the

* The *Annales d'Hygiène Publique et de Médecine Légale* (page 159—1859) make the fullest confession of such fact in France. Unhappily it is the same everywhere. Patients are crammed into large asylums and become incurable because of the fact that they are not individually attended to, in spite of Article XII., Chapter 2, of the French law of the 6th of July, 1838, which says: 'Case books shall be kept, in which, once in the month, physicians will note the change effected in the state of each patient.' But this article of the law cannot be obeyed. How could a physician, having sometimes 700 patients, do such work every month.

Marcé says in his *Traité des Maladies Mentales* (page 656): Patients are crammed, *without intelligence or morality*, in large asylum, and become incurable for the only reason that they are not treated.

Girard de Cailleux says in his celebrated work, *Etudes pratiques sur les Maladies Nerveuses et Mentales*, that those who dispose forcibly of the person of an insane are bound to furnish them with the means of a cure.

only real profit lies in the cure and not the keeping of an inmate. In spite of the desire of many asylum medical officers, no regular individual clinic has yet been established, and, in actual circumstances, it cannot be.

In a practical mode of expression of facts, could not a cure have some relation and reason accounted for as in financial ledgers under the head of credit and debt? If so, the success of treatment could be traced to a scientific disbursement, the conditions of which ought to be prepared and accounted for in really good hospitals. The final question would then be merely as to cost of cures. But what are the results which can reasonably be expected? Calculations have been made and published in the United States upon these questions, in which the pecuniary advantage is not only shown by what it spares by a shorter residence in the hospital, but by the value of the work done during a mean period of active life, compared with that of the same duration as a chronic insane person in a public institution. The proposed scheme is simple, would apparently cost more, but the result *would pay*. The proposed system consists, for recent and acute cases, in a *daily* annotation of the symptoms, and the prescriptions either moral, hygienic, or pharmaceutic. For chronic cases, such annotations should be made every week; the whole, being transferred on case-books, would bear the signature of the attending physician, and be certified by that of the medical superintendent. What a change would such a law bring in our asylums! Their reputation benefited, and the patients asking for admittance instead of avoiding them; this fact is of the utmost importance.

There is another side of the question, relating to the necessity of such law. An officially recorded clinic would be the complementary measure of any improvement of a law concerning the legality of an obligatory confinement. First, such mode of legal treatment would be incompatible with any scientific error or a so-called false imprisonment. Now, supposing that reporters of the press could get admission into an asylum, is it not evident that a daily clinic concerning

diagnosis and prognosis of a stimulated disease would soon establish the truth? Such medical records would contain the whole history of a case. Nothing could escape the investigation of any public officer or that of a friend of patients. Secondly, there would be guarantee for physicians against false accusations or intrigues often made by diastrophics and maniacs. Thirdly, such records would, from themselves, show the merit and assiduity of the medical staff. The resumé of all these therapeutical cases would be one of the best means for the advancement of science. With such conditions legally established, the experiment for cure might take place as well in an asylum as in free air institutions called *Gheels*.

Under the actual law, appropriate care and treatment are often delayed, to the great injury of the patient. Some persons, disbelieving the urgency that a patient be put immediately in some institution, employ all means to conceal the infirmity of a friend or patient. In other cases, especially those in which there is a perversion of the instincts or of volition, terrible accidents may and do happen on account of delays which the new law would not permit. It has been questioned publicly, to whom, for instance, the privilege of interference is to be intrusted, and by what solemnities the deprivation of liberty is to be accompanied and recorded. The new law would have nothing to do with these so-called difficulties. What is wanted is that the patient be cured, in order that he may become again a member of society. Anybody may honorably assist to that effect. There is no shame in having a friend insane, and it is a duty to render him the service pointed out by the law. Besides, there is no greater solemnity in making a circumstantial and scientific affidavit; the effect on the position of the individual is only felt when the judge makes an order of confinement. Publicity would not be required or feared in such a preliminary proceeding.

In spite of some very rare exceptions, we must say that isolation among relatives is objectionable for all parties con-

cerned. The obligatory medical treatment has other advantages, which cannot be well shown without referring to the actual system. In every free country the deprivation of one's liberty is the greatest restriction which can be placed on a citizen. To some minds, this restrictive measure conveys the idea of personal degradation. It has been inquired if restrictive measures could not be enforced privately in one's own house. There are grave objections to private or secret isolation. First, how will the patient bear it in his own house? It might become a cause of incurability. Secondly, it might be resorted to unnecessarily, and the physician's opinion might not be preponderant. We have the experience of many families whose fireside, although well governed, was the worst place for the patient to be medically treated. Generally, relatives are the worst custodians; for this reason, that they are unable to trace a moral symptom to its real cause. Constant efforts are made to educe, by reasoning, their friend out of his delusions. With the best views and intentions, they aggravate the disease. Besides, there is also a danger for the family. The patient is a point of contamination, especially if the slightest hereditary predisposition exists. For patients who must be kept in isolation, their liberty and the respect of their rights cannot fall within the range of domestic affairs. If one of the members of a family disappears, has the State or community not the duty of inquiring what has befallen one of its members? The law might admit that, under the supervision of medical officers appointed by judges, such isolation might take place, but the public would soon find out that special institutions are preferable. Again, the interference of the law is as necessary for the interests of the family as it is useful for the patient. On one side, it settles many questions of false delicacy which may injure the patient, and leaves to the family the power to go beyond, but never to fall short of what belongs to the patient. On the other side, the family is not directly responsible; the recovered patient can never be dissatisfied with the

proceedings employed for his treatment ; he has had the benefit of a really protective law.

Another point of great importance is, as to what such laws should require about the making of medical affidavits or certificates concerning insanity. These legal instruments are of extreme importance. After they establish the probable insanity of a person, and serve to obtain a judicial order for admission into an asylum, their efficacy ceases, and their value must be controlled, admitted, or rejected, by the administrative and medical chief of the asylum—the superintendent. These affidavits, although introductory instruments, should contain all the data of which the asylum officers are absolutely in need. Thus they ought to contain not only the general outlines and a history of the case, with all possible details concerning the patient and his circumstances, but describe the observed indications and symptoms, both moral and physiological. The latter especially must be minutely described, because they are the medical test of the value of such documents. These data are indispensable for the definitive diagnosis made in the asylum. It is easily understood that an individual might simulate with more or less success the moral symptoms, but he could not produce the pathological ones. Medical experts consider generally the coexistence of appreciable signs of a bodily infirmity in co-relation with mental derangement as unequivocal proof. Insanity, like any other disease, has definite forms, recurring through different well-known stages.

In conclusion, I have not the presumption to offer to the Society a perfect scheme. It is simply an idea of what appears to me ought to be discussed, and ultimately perfected. I have no doubt that the above-mentioned evils will be eradicated when a sufficient medical staff, headed by a physician whose responsibility and action should be complete and free, will keep authenticated records of their work and devotion.

MORBID IMPULSE.*

BY WILLIAM A. HAMMOND, M. D.

It is related† of the Prince de Talleyrand that upon one occasion this great statesman told the following circumstance of his eventful life.

“I can never forget,” said the prince, “that I was once gifted for a moment with an extraordinary and inexplicable prescience, which was the means of saving my life. Without that sudden and mysterious inspiration I should not be here to recount these curious details. I was intimately acquainted with my countryman Mr. B. We had always lived on the best terms, and in those stormy times something more than friendship was required to unite persons when the expression of friendship demanded almost a divine courage. I had no cause to doubt his affection; on the contrary, he had on several occasions given me the most devoted proofs of his attachment to my person and interests. We had together quitted France to take refuge in New York, and had hitherto lived in perfect harmony. Wishing to increase our little capital, I had freighted a ship, half shares with him, to try our fortune in the Indies. We were ready for our departure, but waited for a favorable wind with the greatest impatience. This state of uncertainty appeared to sour poor B. in a most extraordinary degree. Incapable of remaining quiet, he roamed the city with a feverish anxiety, which for the moment excited my surprise, for he was always remarkable for

* Read May 28, 1874.

† *Hallucinations ou Histoire raisonné des Apparitions, etc.* Par A. Brière de Boismant. Paris, 1852.

his calmness and placidity. One day he entered the room, apparently under great excitement, although he used great efforts to restrain himself. I was writing letters to Europe. Leaning over my shoulder, he said with a forced gayety: 'Why do you lose time in writing these letters? They will never reach their destination. Come with me, and let us make the round of the Battery. The wind may become favorable; perhaps we are nearer our departure than we think!'

"The day was magnificent, although the wind was high. I allowed myself to be persuaded. B., as I afterwards recollected, showed extraordinary alacrity in closing my desk, arranging my papers, and offering my hat and cane, which I attributed to the need of incessant activity, with which he had appeared overwhelmed ever since our forced departure. We threaded the well-peopled streets and reached the Battery. He had offered me his arm, and hurried as if he were in haste to reach it. When we were in the grand esplanade B. hastened still more, until we reached the edge. He spoke loudly and rapidly, and admired in energetic terms the beauties of the scene. Suddenly he stopped in the midst of his incoherent talk. I had disengaged my arm from his and stood firmly before him. I fixed my eyes upon him, he moved aside as if intimidated and ashamed. 'B.,' said I, 'your intention is to kill me; you mean to throw me from this height into the sea. Deny it, monster, if you dare!' The insane man looked at me intently with his haggard eyes for a moment, but I was careful not to remove my looks from him, and his eyes fell. He muttered some incoherent words and endeavored to pass me; but I spread my arms and prevented him. Casting a wild look around, he threw himself on my neck and burst into tears. 'It is true, it is true, my friend! The thought has tormented me day and night like an infernal flame. It was for that I brought you here. See, you are not a foot from the precipice. Another instant the deed would have been done.' The demon had abandoned him; his eyes were void of expression; a white foam covered

his parched lips; the crisis had passed. I conducted him home. Some days of rest, bleeding and dieting entirely cured him; and what is the most singular circumstance of all, we never referred to the occurrence."

Barbara Erkhov, a Russian peasant woman, twenty years old, was delivered of a son a year after her marriage. Two weeks subsequently her husband went to a neighboring village, leaving his wife at home with his mother. While Barbara was nursing the infant, the mother-in-law made a fire in the stove, and soon afterwards left the room. In an instant Barbara seized her child and threw him into the stove. She then lay down on a bed which was in the chamber. Almost immediately afterwards her mother-in-law re-entered the room, saw the infant in the fire, and snatched it from the flames. The child died in her arms. Barbara could not explain her conduct otherwise than by declaring that she was suddenly seized with the impulse to throw her infant into the stove, and that she had done it without thought or cause.*

These cases are sufficient to show what constitutes morbid impulse. It may be defined as a condition in which the affected individual is impelled consciously to commit an act which is contrary to his natural reason and against his normal inclinations.

It is necessary not to confound this state with others, which in some respects it resembles, but which are, nevertheless, quite distinct from it. Thus the person who under the influence of a delusion commits an act of violence against another, or himself, is not the subject of morbid impulse, for he acts in accordance with his reason, perverted though it may be.

A man, for instance, acquires the idea that some one of his relatives or friends is seeking an opportunity to poison him. The delusion grows with every moment of his life, and ere long dominates over his mind with terrible power. He

* Dagonet. *Des Impulsions dans la Folie et de la Folie impulsive. Annales Médico-Psychologiques*, Sept., 1870, p. 238.

lies in wait for his supposed enemy, and murders him. Such an act is not what is understood as being the result of morbid impulse. It is a deed growing out of intellectual processes logical in character but based upon false premises.

Or a person may imagine that invisible devils are endeavoring to destroy him, and to escape from his tormentors he commits suicide. In such a case he reasons from his supposed state of facts, and chooses an alternative which, under the circumstances, he believes to be preferable to continued existence.

Neither are the unconscious acts of certain epileptics the result of morbid impulse, though in some respects they bear a great degree of resemblance to those which are dictated by the condition in question. The element of unconsciousness is sufficient to distinguish them.

Marc* relates the following case: A shoemaker, aged 35, an industrious and sober man, rose early one morning and resumed his work. Shortly afterwards his wife noticed that his speech was irrational and incoherent, and suddenly the unfortunate man seized his knife and rushed furiously upon her in order to kill her. His face was red, and his whole aspect was that of a maniac. Gradually he became quiet, but his pulse was full and frequent, his tongue dry, and the surface of his body covered with perspiration. In a few hours he was calm and asleep, and in the evening was perfectly rational. He had no recollection whatever of the events of the morning.

A Swabian peasant, who had for eighteen years been subject to epileptic paroxysms, experienced a change in the type of his disease, the fits being replaced by attacks of homicidal fury. The impulses to kill were preceded by somnolence and lassitude. When he felt them coming on he would beg to be restrained, and would implore his mother and others to get out of his reach. He had no subsequent recollection of his acts.

* De la Folie considérée dans les Rapports avec les questions Médico-Judiciaires, ii. p. 510.

Many similar cases are cited by authors, and several very interesting ones are given by Trousseau.* A number of instances of like character have come under my own immediate observation. Two of these are referred to in another publication,† but the following is of more recent occurrence.

I was consulted in the case of a young lady, an inmate of a fashionable school in this city, who immediately before each menstrual period was attacked with paroxysms of great and uncontrollable excitement, during which she attempted to destroy every object within her reach. In one of these, which had occurred just before I saw her, she had broken a large drawing-room mirror, a mantel-clock, and several valuable vases and ornaments before she could be restrained. One morning she entered my consulting-room with the governess, and almost before I could speak to her the fit seized her. Her face and neck became red, her eyes sparkled, she trembled from head to foot, and ere I was able to prevent her, she grasped a bronze, dagger-like paper-knife that lay on my table, and attempted to plunge into her breast. Fortunately it struck in the steel support of her corsets, and before she could repeat the act, I caught her arm and took the weapon from her. In a few moments she was calm, and had no recollection of what she had done. The attack was clearly epileptic in character, and shortly afterwards her seizures assumed the regular form of the *grand mal*.

In true morbid impulse the individual who is its subject is perfectly aware of the incongruous act he is about to commit, but perpetrates it because he is compelled thereto by a force which he feels himself powerless to resist. He acts calmly and deliberately very often, but again manifests agitation and excitement. He does not for a moment lose consciousness, and when his impulse has been acted upon, or his purpose

* Clinique Médicale. Art., Congestion Apoplectiforme Cerebrale.

† A treatise on Diseases of the Nervous System. New York. Fourth edition, 1873.

changed by any for the instant more powerful cause, he recollects distinctly all the circumstances of the occasion.

It frequently happens that the patient struggles successfully against these impulses which he experiences even when on the very point of yielding, or he takes such measures of prevention as are sufficient for the purpose, or the impulse disappears apparently spontaneously or as a consequence of appropriate medical treatment.

Georget* relates the case of a woman, the wife of a shoemaker, who felt herself impelled to murder her four children. She sought medical advice for a disease which, as she said, was driving her to despair. She had the appearance of health, slept well, was regular in her menstrual function, had no pain and no disturbance of the circulation. But she complained of being subject to a morbid impulse to kill her children, although she declared that she loved them better than she did herself. When the paroxysm was at its highest her face became red and she trembled violently. She was cured by the use of baths, valerian, and a blister applied between the shoulders.

The same author quotes from Michu the following case:†

“A countrywoman, twenty-four years old, having simple manners and good habits, but rather taciturn, was safely delivered of her first child ten days previously, when she suddenly, while looking at it intently, experienced a desire to strangle it. The idea of such a thing made her shudder with horror. She placed the infant in its cradle and rushed out of the house, hoping to divert herself from her fatal impulse. Returning home to nurse her child, she again experienced the sensation of being forced to kill it. Again she left the house, and, going to the church, prayed to be delivered from the sin of murder. Soon afterward she met the priest, who, being a sensible man, advised her to consult a physician, and in the meantime promised to watch her. Michu was consulted. He

* *Discussion Médico-Legale sur la Folie, etc.* Paris, 1826.

† *Op. cit.*, p. 50.

observed nothing abnormal in the appearance of the woman. When asked if she loved her baby, she replied : ' I know well that a mother ought to love her child ; if I do not love mine it is not my fault.' Michu very wisely insisted on removing the child from her, and in the course of a few days the impulse disappeared."

Very slight causes are often sufficient to destroy or overcome the morbid impulse. Marc* cites the case of M. R., a distinguished chemist and an amiable man, who feeling himself compelled to commit murder, and fearing his inability to resist, voluntarily placed himself in a *maison de santé* of the faubourg St. Antoine. Tormented by the desire to kill, he often prostrated himself before the altar and implored the Almighty to deliver him from his atrocious impulse, the origin of which he could not explain. When he felt that his will was yielding, he went to the superintendent of the asylum, and had him tie his thumbs together with a ribbon. This weak band was sufficient to calm the unfortunate man for a time ; but eventually he attempted to kill one of his keepers, and finally died in a paroxysm of acute mania.

Again, all the efforts of the affected individual are apparently unsuccessful, and the fatal deed is committed. I say *apparently*, because we never can be sure that the patient has exercised all his will power. When he effectually resists there are not wanting those who will declare that the case is not one of morbid impulse ; while, when he yields, at once or eventually, these same persons will just as strongly affirm that the impulse was irresistible. Several cases have come under my observation in which patients have confessed to me that they have had impulses to commit various kinds of crimes, which they have been barely able to resist. These people have passed through life attending faithfully to their several duties, and entirely unsuspected of contending with themselves in so terrible a manner.

A few weeks ago a young man consulted me for symptoms

* Consultation Médico-Legal pour Henriette Cornier, etc.

indicating cerebral congestion. He had pain in his head, dizziness, and was unable to sleep. He informed me that he had been for several months constantly troubled by a force, which was inexplicable to him, to kill a friend, who was employed in the same office with him. Upon one occasion he had gone so far as to secretly put strychnia into a mug of ale, which he had invited the young man to drink; but, just as the intended victim was raising the vessel to his lips, he had, as if by accident, knocked it out of his hand. Every morning he awoke with the impulse so strong upon him that he felt certain he would carry it out before the day closed; but he had always been able to overcome it.

This young man reasoned perfectly well, in regard to his impulse, and very candidly admitted, and I entirely agreed with him, that if he had yielded and committed the murder, he ought to have been punished to the full extent of the law.

The following extract from a letter which I recently received is likewise to the point:

"In the *New York Sun* of the 30th inst. I noticed the proceedings of the Medico-Legal Society, in the College of Physicians and Surgeons, on emotional insanity, etc., and I was impressed particularly with your remarks on 'Morbid Impulse.' Some two weeks since I was at work in my garden with a spade, and one of my little girl children, just three years old, came in where I was, and I was suddenly seized with an impulse to kill the child with the spade that I was at work with, and in order to prevent my doing so I had to make her leave the garden. Now, I love this child better than I do the apple of my eye, and why I was seized with that impulse I can't say. Since that time I have been feeling strange, and I am afraid to trust myself with my own family, though I know perfectly well what I am doing, and only feel actuated by these impulses. I have consulted a physician, and he laughed at me. If you can suggest any remedy for these strange impulses, I will pay you what you charge, and will consider that you have done me a favor that

... will cause me to bless your name forever. I don't consider that I am in any danger of murdering any one just yet; but the idea of such a thing is horrible, and I fear it may grow on me unless remedied."

In my reply I called his attention to the admitted fact that he had his impulse under control; that he was able to reason calmly and intelligently in regard to it; that he had applied to me for advice, and that I urged him, without delay, to place himself under the restraint of an asylum. I further told him, that if he disregarded this advice, and finally yielded to his impulse, he would be fully as guilty of murder as if he had killed through deliberate malice, and that he ought to be just as surely executed as any other murderer.

It not infrequently happens that so far from the individual attempting to combat his morbid impulses, he takes positive pleasure in obeying them, and in perpetrating crimes remarkable for their cruelty and for their apparently motiveless character. He may thus, in the gratification he experiences, entirely lose sight of the original excitation. As Ray* says:

"The sentiments of truth, honor, honesty, benevolence, purity, have given place to mendacity, dishonesty, obscenity, and selfishness, and all sense of shame and self-content has disappeared, while the intellect has lost none of its usual power to argue, convince, please, or charm. I once asked a patient who was constantly saying or doing something to annoy or disturb others, while his intellect was apparently as free from delusion or any other impairment as ever, whether in committing his aggressive acts he felt constrained by an irresistible influence, contrary to his convictions of right, or was not aware at the moment that he was doing wrong. His reply should sink deep into the hearts of those who legislate for, or sit in judgment on, the insane. 'I neither acted from an irresistible impulse, nor upon the belief that I was doing right. I knew perfectly well I was doing wrong, and I might have refrained if I had pleased. I did

* A Treatise on the Medical Jurisprudence of Insanity. Fifth Edition. Boston, 1871. p. 223.

thus, and so, because I loved to do it. It gave me an indescribable pleasure to do wrong.' Yet this man, when well, is kind and benevolent, and in his whole walk and conversation a model of propriety."

A few years ago a young man was arrested in this city for assaulting a young lady in the street. He was identified as a person who had committed many previous offences of a like character. His plan was to rush up to a lady, seize her, throw her down, and take off her shoes, which he carried away with him. He did not attempt otherwise to injure her, or to take away any other article from her. On searching his trunks and drawers, they were found full of women's shoes. He said he had no use for them, and was actuated by an irresistible impulse which it was pleasant for him to gratify.

Dr. Dickson states* the case of the son of a gentleman, in a high position, who was sent away from school because he stole. Among the things which he confessed to have stolen were blankets and sheets, which he took off his own and other boys' bed-clothing, and a variety of articles, among which were two pairs of plated nut-crackers, which he sold for a shilling a pair. On asking him if he wanted the money, he said no, that he had plenty of money; but that he felt something he could not describe enjoining him to take the things. He was greatly distressed, but he declared that he could not control himself, so irresistible was the impulse; and he then admitted that the day before Dr. Dickson saw him he had stolen some jewelry from his father, although, when first charged with the theft, he had stoutly denied it. His impulse was simply to take; after he had possessed himself of many of the things he did not know what to do with them, and attached no value to them. The jewelry he stole he simply treated as toys. Some of the articles he stole at school he hid in a garden, and others he sold. It appeared that he disposed of them merely to rid himself of their en-

* The Science and Practice of Medicine in Relation to Mind, etc. London, 1874, p. 433.

cumbrance. He felt that the things had been stolen, and must be got rid of some way, and the readiest way was that of selling them.

In 1828 Papavoine killed, in the forest of Vincennes, two little boys, who were there on a holiday with their mother. He had never seen these children before, and when seized with the impulse to kill them, went and bought a knife for the purpose ; returning, he murdered them, before their mother's eyes, and made his escape. On being arrested and identified, he at first denied the charge, but subsequently admitted its truth. Confined in prison, he set fire to his bed and attempted to murder a fellow-prisoner. When interrogated during his trial, he declared that at the time of the double murder he was in bad health, had been unable to sleep, and was nervous. He asserted that he had no motive whatever to kill the two children. Inquiry into his antecedents showed that, though he had been quiet and taciturn in his habits, he had never exhibited any indications of insanity, but had discharged with fidelity the duties of an office he held under the government, and had retired with a pension. The plea of insanity was put forward by his counsel, but it was disregarded by the jury, and he was found guilty and executed.

This case is similar in several respects to that of Waltz, recently executed at Catskill, in this State, for the murder of Holden. This man had probably been guilty of a previous murder, and while in prison killed without cause one of the keepers of the jail.

Undoubtedly the force of habit, of which I shall have occasion to speak further on, has much to do with the repetition of a crime, which at first is simply impulsive. This was evidently the case with H  l  ne J  gado, who in France, in the period between the years 1833 and 1851, killed twenty-eight persons with poison, besides making eight unsuccessful attempts. In none of her murders was any cause alleged or discovered. Her victims were her masters and mistresses, her fellow-servants, her friends, for whom, in their dying moments, she displayed the utmost tenderness and care. The

plea of monomania was set up in her defence ; but no evidence of insanity was brought forward by her counsel save the want of motive for her crimes. She was found guilty by the jury, after a short deliberation, and was in due time executed. Her last words on the scaffold were directed to accusing a woman as her instigator and accomplice, whose name was not even mentioned during the trial, and who, upon inquiry, was found to be an old paralytic, whose life had been of the most exemplary character.

The case of Dumollard—likewise drawn from the jurisprudence of France, though other countries are not deficient in similar instances—also illustrates the force of habit. This man, a peasant of a low order of intellect, had a *penchant* for murdering servant girls, whom he pretended to hire, and then conducting them to unfrequented places, put them to death. Six thus disappeared, and nine others barely escaped. Indeed, it is probable that many more than these were murdered, for on searching his premises twelve hundred and fifty articles of woman's apparel were found, of which only fifty were identified. As some one said at the time, Dumollard ought to have had a cemetery of his own. And yet there was no such motive for his crimes as would adequately account for them. He did not sell the clothing and other things of little value which he obtained from his victims. Indeed, it was shown that he had burned and otherwise destroyed many of them, and the rest were, as I have said, hidden in out-of-the-way places about his dwelling. There was no evidence to show that he had outraged any of those whom he had murdered, and he was found not guilty of the accusation to this effect. He appears to have been wholly actuated by morbid impulse and the force of habit—a habit which had become a portion of his physical being, and which it afforded him pleasure to indulge. Insanity was urged in his defence, but he was found guilty and was executed.

Many other cases might be brought forward, some of them of recent occurrence, and belonging to this country ; but I

must close this part of my memoir with a reference to but one other, that of Jesse Pomeroy, the boy murderer of a few days ago.

As many here to-night will call to mind, about two years since there was great excitement in Chelsea, near Boston, over a number of horrible instances of cruelty perpetrated on little children. The victims were tortured in various ways, sometimes by being cut with knives in various parts of their bodies; again by being tied to beams and beaten with ropes and sticks till their bones were broken or their teeth knocked out; and again by having pins and needles run into sensitive parts of their bodies, upon which salt water was afterwards poured. Pomeroy, a boy about fourteen years old, and the son of a respectable widow woman, was ascertained to be the perpetrator, after about a hundred other boys had been arrested on suspicion. When arraigned he admitted his guilt, and could only plead in his defence that he "could not help it." He was convicted and sent to the House of Refuge. After remaining there a year and five months, he was, at the earnest request of his mother, and furthermore, in view of his good conduct while in confinement, pardoned, and on the 6th of February of the present year he returned home. On the 22d of April, a little fellow named Horace Mullen, and the son of a poor cabinetmaker, was found dead in the Dorchester marshes. The body was horribly mutilated, the head was nearly severed from the trunk, and about thirty stabs were found in different parts of the body.

Jesse Pomeroy was at once suspected as the murderer. On examination a knife spotted with blood was found on his person, another spot on the breast of his shirt, and his boots were covered with mud like that found in the marshes. Upon repairing to the place where the body was found, the officers discovered footprints which corresponded with those made by Pomeroy's boots. When confronted with the body of the murdered child, Pomeroy trembled all over and turned away his head.

"Did you know that little boy?" inquired the officer.

"Yes, sir; but I don't want to look at him any more."

"Did you kill him?"

"I suppose I did."

"How did you get the blood off the knife? Did you wash it?"

"No, sir; I stuck it in the mud."

He further said that if he did the deed he was sorry for it, and hoped his mother would not know of it. When asked by the officer what he thought ought to be done with him, he replied, and his answer ought to sink deeply into the hearts of all judges, jurymen, and lawmakers,

"Put somewhere, so I can't do such things."

These cases are sufficient to show the nature of morbid impulse. There are hundreds of others which I might have brought forward, with many of which you are doubtless familiar; but I preferred to cite a few striking instances which are not commonly quoted. A few additional points relative to morbid impulse, and especially in regard to its psychical cause, require some notice. The first of these is *suggestion*. The action of this principle is well shown in the following case:

A young man, a member of a highly respectable family, consulted me for what he called insanity. It appeared that a few weeks previously, while walking down Broadway, he had been struck with the appearance of a lady in front of him, who wore a very rich black silk dress. Suddenly the impulse seized him to ruin this dress by throwing sulphuric acid on it. He therefore stopped at an apothecary's shop, and purchased a small vial of oil of vitriol. Hastening his pace, he soon overtook the lady, and walking by her side he managed in the crowd to empty his vial over her dress without being perceived. He derived so much satisfaction from this act that he resolved to repeat it at once. He therefore purchased another supply of vitriol, and singling out a lady better dressed than others around her, poured the contents of the vial over her dress, and again escaped detection. He

then went home, and reflecting upon what he had done, determined to persevere in the practice; but a night's rest put him in a healthier frame of mind, and he concluded to abandon the idea. Indeed, he was so distressed by what he had already done, that he wrote out an advertisement for the newspapers, in which he requested the ladies whose dresses he had spoiled, to reply through the same channel, giving their residences, so that he might recompense them for the loss he had caused them to sustain. But on his way to the newspaper offices he again felt the impulse at sight of a handsome dress to throw vitriol on it, and again he purchased a supply and repeated the act of the day before.

He now began to consider more fully than he had yet done the nature and consequences of his conduct, and the next morning came to me for advice. He stated very frankly his entire conviction that his acts were in the highest degree immoral and degrading, but expressed to me his utter inability to refrain.

"A handsome dress," he said, "acts upon me very much as I suppose a piece of red cloth does on an infuriated bull; I must attack it. The bull uses his horns, while I use vitriol. I do not know why the idea ever came into my head. I certainly should never have conceived of such a thing if I had been blind. I was altogether excited by the sight of that handsome black silk dress the first day, and it was impossible for me to resist it after it once had a lodging in my mind. But I have often seen fully as handsome dresses in the street before, but never previously was the sight followed by such an impulse."

Upon the most careful examination I could discover no evidence of disease anywhere, except in the one point of wakefulness, with which he had suffered more or less for several months past. I therefore prescribed bromide of calcium for him, and insisted on his removing himself from further temptation by taking a sea voyage in a sailing vessel upon which there were no women passengers. He at once expressed his acquiescence in my views. He went to sea in

a fishing schooner, and returned in three or four months perfectly free from his morbid impulse.

A gentleman who came about once a week to consult me for cerebral congestion, the result of excessive application to business, and who lived in a neighboring town, informed me that during his journeys by rail he invariably experienced an impulse to throw himself from the train. Finally he was so strongly impelled that he stated the case to an acquaintance in the cars, and begged him to sit near him, and restrain him, if he made any such attempt. After that he never came without bringing a friend with him, who had instructions not to lose sight of him for an instant. In telling me of his impulse he described it as almost overwhelming, and that it seemed to be excited by the rapid motion, and by the fact that he had heard of people throwing themselves from railway trains.

It is well known that persons standing on great heights often experience an impulse to jump off. So many individuals committed suicide by leaping from the *Colonne Vendôme* and *Arc de Triomphe* in Paris, and from the Duke of York's Monument in London, that precautions had to be taken to prevent further acts of the kind.

Marc relates the case of a nurse who felt the impulse to murder the infant she took care of, whenever she saw its naked skin. She threw herself on her knees before her mistress, and begged to be discharged, declaring that the whiteness of the child's skin excited her to murder it, and that she could no longer resist the impulse.

Several years since, I had a lady under my charge who, whenever she saw the naked shoulders of a young child felt an impulse, which she declared she could not resist, to bite the skin. She had thus inflicted very disagreeable wounds on the children of her friends, and was finally arrested on the charge of assault, but the matter was hushed up on her promise to abstain, and she kept her promise.

Morbid impulses are often excited by the sight of a suitable weapon with which an act of violence may be committed.

Persons have hanged themselves on the suggestion of seeing a rope; others have committed murder or suicide from seeing knives, pistols, etc. Even a word spoken in jest may be sufficient. Dr. Oppenheim, of Hamburg, having received for dissection the body of a man who had committed suicide by cutting his throat, but who had done this in such a manner that his death did not take place until after an interval of great suffering, jokingly remarked to his attendant, "If you have any fancy to cut your throat, don't do it in such a bungling way as this; a little more to the left here, and you will cut the carotid artery." The individual to whom this dangerous advice was given was a sober, steady man, with a family and a comfortable subsistence. He had never manifested the slightest tendency to suicide, and had no motive to commit it. Yet, strange to say, the sight of the corpse and the observation made by Dr. Oppenheim suggested to his mind the idea of self-destruction and this took such firm hold on him that he carried it into execution, fortunately, however, without profiting by the anatomical instruction he had received, for he did not cut the carotid artery.

Closely allied to suggestion, and probably a more powerful cause of morbid impulse, is *imitation*. Thus many crimes have been committed by persons who have had this impulse excited by reading accounts of the trials of other persons, or the detailed recitals of all the particulars of offenses which the age requires the public press to contain. Epidemics of murder, suicide, arson, and other crimes are thus produced. "Some years ago," says Dr. Forbes Winslow,* "a man hung himself on the threshold of one of the doors at the Hôtel des Invalides. No suicide had occurred at the establishment for two years previously; but in the succeeding fortnight five invalids hung themselves on the cross-bar, and the governor was obliged to shut up the passage."

Epidemics of suicide spread, according to Plutarch, among the women of Miletus, and, as is well known, in later days among the young women of Marseilles.

* The Anatomy of Suicide. London, 1840, p. 120.

A careful attention to the cases of suicide recorded in the daily newspapers of a large city shows that they are largely influenced in character by the principle of imitation. A case of suicide by Paris green is published, and straightway half a dozen others due to this poison are the result. Or a man or woman jumps from a ferry-boat while it is crossing the river, and then this mode becomes the fashion for a while, to be followed in its turn by some other method.

When I was a medical student of the University of New York, a young gentleman from Georgia was on one occasion dissecting the same body that I was. He had drawn one of the lower extremities as his part of the subject, and he was assiduous and careful in his duties. So far as my observation of him extended, he did not differ essentially from other medical students. He was cheerful in disposition, and gave no evidence whatever of mental derangement, or even of excitement or depression of mind. One morning we were told that he had been found dead on the floor of his bedroom, and examination showed that he had divided his femoral artery, and had died from hemorrhage. It was then ascertained that he had, the evening before, received a letter which had apparently caused him much unhappiness.

Now, suicide from division of the femoral artery is certainly a very unusual mode of self-destruction. I doubt if any case of the kind had previously occurred in New York. Yet within a week there were two others, of which was Horace Wells, the alleged discoverer of the anæsthetic properties of sulphuric ether.

Here we have the principle of suggestion acting on the first victim, and then that of imitation on the others.

Imitation is of more force when the intellect is less fully developed. Even in the normal condition we find it more strongly exercised in children and women than in adult men. In the former the influence may be so powerful that actual disease is acquired. Thus a child imitates the movements of another affected with chorea or with stammering, and imme-

diately acquires the disorder. Even squinting has been contracted in this manner.

A lady had received such a vivid impression at seeing her maid throw herself down a well, that she never passed a well without feeling a strong impulse to throw herself into it.*

An idiot, after having killed a pig, felt impelled to kill a man, and obeyed the impulse on the first one he met.

A melancholic person was present at the execution of a criminal, and was immediately seized with an impulse, of which he was fully conscious, and could scarcely resist, to murder some one.

A child six years old strangled its younger brother. The father and mother entering the room at the moment the act was in process of accomplishment, demanded the cause. The child threw itself, weeping, into their arms, and answered that it was imitating the devil, whom it had seen strangle punchinello.

Such cases as these are at least of value if they cause us to recognize the force of the principle of imitation, and to render less public than they are now the execution of criminals and the slaughter of animals.

In the month of February, 1846, three hundred and fifty French soldiers were encamped together in Algiers, when one of them wounded himself in the wrist. Within twenty days thereafter, thirteen others had injured themselves in precisely the same manner. The commandant, frightened at this series of mutilations, removed his camp to a distance of eight leagues; but what was his astonishment to find that within a week eight others had voluntarily wounded themselves in the same way.

As is well known, Henriette Cornier had an impulse to kill a child of which she had the care. She obeyed the impulse, and after the publication of the trial six cases, as Esquirol informed Prichard, of homicidal impulse were directly traced

* Gall. *Fonctions du cerveau et de chacune de ses parties*. T. x., p. 199.

to that one act. In his work on insanity he refers to two others of similar origin.

The well-known tendency of many women to become affected with hysteria at the sight of another suffering from a paroxysm of the disease, and the similar fact of the extension of epidemics of demonomania, trance, ecstasy, the impulse to mew like a cat or to bleat like a sheep, and, it may be added, crusading, both of mediæval and of more recent times, may also be cited as illustrations in point.

The influence of *habit* in fostering a morbid impulse which has once been felt or yielded to, is exceedingly powerful, and has already been incidentally mentioned in the present memoir.

When a living being performs an act under the operation of certain impressions which are received, there is a tendency to the performance of a similar act if like influences are brought to bear on the organism. Every time the act is performed, the disposition to repeat it becomes stronger, until at last the habit is so firmly established and the act is accomplished without the reception of impressions similar to those which originally gave rise to it, but solely through the force of the newly organized power. This disposition to repetition is not limited to physical acts, it prevails in regard to almost every function of the body and mind, to trains and modes of thought, and forms, often, an important element in the production of disease.

Habit, therefore, is periodicity, and may be defined as the disposition which the organism acquires from the frequent performance of certain acts to repeat these acts until some more powerful force intervenes.

Some persons are more under the influence of habit than others. They acquire a habit more quickly, and lose it with less facility. So strong are the unpleasant feelings excited by any interruption in the regular course of their habits, that they will endure the greatest inconveniences in order to indulge in them. I knew a gentleman whose custom it was to touch a certain tree on the road from his house to the rail-

way station, a distance of about five miles, as he daily went to his place of business. On one occasion, through absence of mind, he neglected this action, and rode several hundred yards before he discovered his omission. Though feeling annoyed, he continued his journey; but the uncomfortable sensation became too strong for him to endure it longer, and after having ridden two miles past the tree, at the risk of missing the train he galloped back and touched it as usual.

There can be no doubt that morbid impulse is often continued, from the force of habit, long after the original excitation has been forgotten. I have adduced cases which, so far as could be ascertained, were instances of the kind, and I could readily cite, both from my own experience and that of others, many additional ones to the same effect. But the following must suffice:

A lady came under my observation who was subject to no delusion, and who had never given any evidence of mental alienation except in exhibiting an impulse, which she declared she could not control, to throw valuable articles into the fire. At first, as she said in her confession to me, the impulse was excited by the satisfaction she derived from seeing an old pair of slippers curl up in fantastic shapes after she had thrown them into a blazing wood fire. She repeated the act the following day, but not having a pair of old shoes to burn, she used instead a felt hat which was no longer fashionable. But this did not undergo contortions like the shoes, and therefore she had no pleasurable sensations like those of the day before, and thus, as far as any satisfaction was concerned, the experiment was a failure. On the ensuing day, however, she, to her great surprise, felt it would be a pleasant thing to burn something. She was very clear that this pleasure consisted solely in the fulfillment of an impulse which, to a certain extent, had become habitual. She therefore seized a handsomely bound prayer-book which lay on the table, and throwing it into the fire, turned away her face and walked to another part of the room. It was very certain,

therefore, that she was no longer gratified by the sight of the burning articles. She went on repeating this act with her own things, and even with those which did not belong to her, until she became a nuisance to herself and all those with whom she had any relations. Her destructive propensities stopped at nothing which was capable of being consumed; books, bonnets, shawls, laces, handkerchiefs, and even table-covers and bed-linen helped to swell the list of her sacrifices. As soon as she had thrown the articles into the fire the impulse was satisfied. She did not care to see them burn; on the contrary; the sight was rather disagreeable to her than otherwise. But the force which affected her in the way it did, she represented as being imperative, and if not immediately allowed to act, giving rise to the most irritable and unpleasant sensations, which she could not describe otherwise than by saying that she felt as if she would have to fly, or to jump, or run, and that there was a feeling under the skin all over the body as if the flesh were in motion. As soon as she had yielded to the impulse these sensations disappeared. She was entirely cured, not by placing her in an asylum, but by subjecting her to such physical restraint as could readily be enforced within the precincts of her own home, and by the use of such medical remedies as were calculated to lessen the irritability of her nervous system.

In most of the different forms in which morbid impulse manifests itself, the influence of habit is equally well shown. It is especially powerful in the species of mental aberration known as kleptomania.

Another influence in the causation of morbid influence not to be disregarded is *hereditary tendency*. It is well known that many affections of the nervous system are the result of this force; not that such diseases necessarily predispose to the transmission of similar disorders, but that they do tend to the propagation of some affection of the nervous organization. It is not surprising, therefore, to find that the subjects of morbid impulse often have ancestors who have suffered

from well-marked insanity, epilepsy, neuralgia, or other disease, the result of nervous derangement.

But it is not uncommon to find a particular morbid impulse transmitted in kind. This is especially true of the impulse to commit murder and suicide, and above all of the latter. Thus Cazauvieilh,* of eighty-one suicides, the cases of which form the basis of his work, found that there was hereditary tendency in thirteen.

The impulse to the abuse of alcoholic liquors is also often hereditary in kind, as many here to-night can testify from their own knowledge.

Relative to the cure of persons affected with morbid impulse, it is scarcely proper in a Society such as this to touch upon the medical treatment; but a few words relative to the moral management may not be out of place. It is certainly true that in many cases impressions stronger in their influence than the morbid impulse can be made upon the minds of the affected individuals, and that thus the impulse is subdued. Plutarch, in his "*Morals*," relates that the Milesian women, whose impulse to suicide has been already cited, and who were so strongly impelled to kill themselves that "neither the tears of father nor mother, nor reasons nor remonstrances nor the comfortable speeches of their friends were of any avail," but who were effectually restrained by the passage of a law, that if any one thereafter should hang herself, her naked body should be dragged through the market-place in view of the whole city, and he adds that the fear of dishonor, shame, and ignominy is of greater power than the fear of death, even though the disgrace takes place after life is extinct.

This law was made use of by the authorities of Marseilles to check the disposition manifested among the young women of that city to self-destruction, and with equally beneficial results.

The first Napoleon, whose knowledge of human nature has

* Du Suicide, etc. Paris, 1840, Tab. 1, p. 18.

rarely been excelled, arrested an epidemic of suicide in his army by appealing to the ennobling emotions of the mind. A grenadier killed himself. This suicide was followed by another, and it was feared that, as in previous instances, the impulse would extend. Bonaparte at once appreciated the necessity for prompt action, and accordingly issued the following general order :

"The grenadier Groblin has committed suicide from a disappointment in love. He was in other respects a worthy man. This is the second event of this kind that has happened in this corps within a month. The first consul directs that it shall be notified in the order of the day of the guard, that a soldier ought to know how to overcome the grief and melancholy of his passions ; that there is as much true courage in bearing mental affliction manfully as remaining unmoved under the fire of a battery. To abandon one's self to grief, without resisting, and to kill one's self in order to escape from it, is like abandoning the field of battle before being conquered."

The effect of this appeal was truly magical, and the disposition to suicide was at once checked.*

The morbid impulse to injure others in property or person can be often restrained by the efforts of the individual who experiences the impulse. Many instances of the kind have come under my observation, and they are frequently overcome by that wholesome fear of the law and the influence of judicious discipline, which even the insane, especially those whose only manifestation of mental aberration consists in morbid impulses, are generally capable of appreciating.

Dr. Carpenter quotes from the report of the Morningdale Lunatic Asylum for 1850 a case which is so apposite in the present connection that I give it entire :†

"The case was that of a female who was not affected with any disorder of her intellectual powers, and who labored

* Dr. Forbes Winslow's *Anatomy of Suicide*. London, 1840, p. 177.

† *Principles of Mental Philosophy*, etc. London, 1874, p. 664.

under no delusions or hallucinations, but who was tormented by a simple abstract desire to kill, or rather—for it took a specific form—to strangle. She made repeated attempts to effect her purpose, attacking all and severally even her own nieces and other relatives; indeed it seemed to be a matter of indifference to her whom she strangled so that she succeeded in killing some one. She recovered under strict discipline so much self-control as to be permitted to work in the washing house or laundry; but she still continued to assert that she ‘must do it;’ that she was ‘certain she would do it some day;’ ‘that she could not help it;’ that ‘surely no one had ever suffered as she had done;’ was not hers ‘an awful case;’ and approaching any one she would gently bring her hand near their throat, and say mildly and persuasively, ‘I would just like to do it.’ She frequently expressed the wish that all the men and women in the world had only one neck, that she might strangle it. Yet this female had a kind and amiable disposition, was beloved by her fellow-patients, so much so that one of them insisted on sleeping with her, although she herself declared that she was afraid she would not be able to resist the impulse to get up during the night and strangle her. She had been a very pious woman, exemplary in her conduct, very fond of attending prayer-meeting, and of visiting the sick, praying with them and reading the scriptures, or repeating to them the services she had heard. It was the second attack of insanity. During the former she had attempted suicide. The disease was hereditary, and it may be believed that she was strongly predisposed to morbid impulses of this character, when it was stated that her sister and mother had both committed suicide. There can be no doubt as to the sincerity of her morbid desires. She was brought to the institution under very severe restraint, and the parties who had brought her were under very great alarm upon the restraint being removed. After its removal she made repeated and very determined attacks upon the other patients, the attendants, and the officers of the asylum, and was only taught to exercise

sufficient self-control by a system of rigid discipline. This female was perfectly aware that her impulses were wrong, and that if she had committed any crime of violence under their influence she would have been exposed to punishment. She deplored in piteous terms the horrible propensity under which she labored. In the report of the same institution for 1853, it is mentioned that this female had been readmitted after nearly succeeding in strangling her sister's child, under the prompting of her homicidal impulse. She displays no delusion or perversion of ideas, but is urged on by an abstract and uncontrollable impulse to do what she knows to be wrong and deeply deplorable."

I have quoted this case for the purpose of showing by the testimony of a superintendent of a lunatic asylum, that even when the morbid impulse is overwhelmingly strong, the subject of it is controlled by discipline, and that, therefore, there are means of subduing the tendency to crime which such people manifest.

A morbid impulse may occasionally be overcome by turning the attention to some analogous but harmless occupation in which the impulse expends itself. Georget* cites the following case, on the authority of Worbe :

"At midnight a man presented himself at the country-seat of the celebrated Antoine Petit, and begged him to cure him of an invincible propensity to kill his master, whom he had served for fifteen years. He added that he had also a strong impulse to kill himself. The idea had come to him very suddenly, and he could not overcome it. Petit received the man kindly, made him sit down, quieted his agitation, and gave him a glass of good wine. At early dawn, under the pretext of getting some remedies for him, he took him to Paris, and, conducting him to a slaughter-house, made him cut the throats of several sheep. The man showed great delight at the proceeding, but at the seventh victim he suddenly turned pale and fell fainting to the ground. This man assumed the trade of a butcher, and on the first day of every

* Op. cit., p. 68.

year came to thank Petit for having saved him from the scaffold."

I once overcame a strong impulse to steal whatever she could lay her hands on, which a wealthy lady exhibited, by directing her mind to the subject of botany, and inducing her to make collections of plants. She gradually became so infatuated with the new pursuit that she lost all kleptomaniacal symptoms.

It is often the case that in women morbid impulses are purely hysterical. They are then to be managed accordingly.

The *legal relations* of morbid impulse are of vast importance to society. My own opinion in regard to the manner in which the law should deal with individuals thus affected will easily be ascertained from the incidental remarks already made in the course of this essay, but it may be well to state them more emphatically than has yet been done.

1st. A person aware of the existence of an impulse to commit crime, and which he fears he may not be able to resist, is bound to do everything in his power to render the accomplishment of his propensity impossible. It is his duty to immediately place himself under restraint. If he does not, he is morally and legally in no better position than a ruffian who feels an impulse to acquire other people's property and accordingly murders the man most convenient for his purpose.

2d. The individual who is clearly shown to have yielded to a *previously unfelt* impulse to commit crime, and who accordingly perpetrates an otherwise motiveless offence, or one which in his normal condition would evidently not have been committed, is too dangerous to society to be allowed to go at large. He ought to be placed under permanent restraint. I say *permanent*, because experience shows that this form of mental aberration is exceeding apt to recur. Several of the cases I have cited are illustrations of crimes committed after the discharge from confinement, and there are hundreds of similar instances on record.

3d. Those morbidly constituted individuals who commit crimes because it is pleasant for them to do so, such as *Hélène*

Jégado, Dumollard, Pomeroy, and others whose cases I have cited, should be treated exactly like other offenders against the laws. The absence of motive is apparent only. The fact that the criminal experiences pleasure from the committal of the act is as strong a motive as any other that can be alleged, and is entitled to no more extenuating force than the pleasure of revenge, or acquisitiveness, or other passions. "Lord, how I do love thieving!" said a London vagabond. "If I had all the riches of the world, I would still be a thief."

4th. The fact that a murder has been committed, in order that the perpetrator might secure his own execution, is not a palliating circumstance. Those who contend that it is—and I am sorry to find Dr. Maudsley among them—seem to be actuated by the erroneous idea that suicide is necessarily the act of an insane person. The desire to be executed may be evidence of a morbid mind, but not necessarily of an insane one; and if we are going to excuse every crime committed by jaundiced and hypochondriacal and notoriety-loving people, we might as well close our courts at once.

5th. A morbid impulse to crime, experienced by an insane person—and by insane person I mean one who exhibits other evidences of insanity besides the morbid impulse, and who would be considered by competent judges to be insane even if no such impulse existed—demands continued sequestration.

6th. But the plea, "*I could not help it*," is one which every member of the criminal classes can urge with as much force as the subject of morbid impulse, and when it stands alone in an otherwise sane individual, should be absolutely disregarded by juries and judges.

DISCUSSION ON MORBID IMPULSE*

At a regular stated meeting of the New York Medico-Legal Society, held at the College of Physicians and Surgeons, corner Twenty-third Street and Fourth Avenue, on the above date, Prof. William A. Hammond, M.D., read a paper entitled "Morbid Impulse," after which the following discussion ensued:

The President, after congratulating the speaker upon the admirable manner in which the theme had been treated, thus placing the matter before the public through the New York Medico-Legal Society, hoped that a subject of so much importance would draw from both members and others an expression of sentiment worthy of the occasion. He saw before him men who had thoroughly studied morbid impulse, and whose minds were consequently richly imbued with ideas relating to the question; men who had performed no small part in affairs pertaining to insanity, whose opinions had been listened to in courts of justice and elsewhere with that deference to which matured judgment entitled them, whose experience was worthy of consideration and respect. In view of these facts, and also because the plea of morbid impulse had been set up as a strong point in the defense of malefactors, both in this and foreign countries, it ought to receive a full and free discussion. He would therefore call upon Dr. Parsons to open the debate.

DR. R. L. PARSONS—I was not fortunate enough to hear the beginning of the paper just read by Dr. Hammond, but suppose that I have heard the greater portion. The natural history of morbid impulses, as given in the paper, accords, as far as I was able to notice, with that given by most writers on the subject, so that little remains to be said on that point.

* June 25th, 1874.

There are some points, however, that seem to merit further discussion, one of which is the great difference that exists between different individuals in regard to susceptibility to morbid impulses. While the mental organization of some persons is such that whatever impulses they may feel are always entirely within their control, the mental equilibrium of others is so unstable, or their power of self-control is so deficient, that their actions are easily determined by their impulses. In other words, their impulses are liable to become morbid. Of those who show other evidences of insanity nothing need be said. Their general condition is usually such that morbid impulses are to be expected and excused. Morbid impulses are especially liable to occur in epileptics, whether there have been other manifestations of insanity or not. Of this important fact no mention was made in the paper read by Dr. Hammond.

DR. HAMMOND—Yes, there was. I referred particularly to that.

DR. PARSONS—This must have been before I arrived. There is nothing more then to say on that point, save to corroborate Dr. Hammond's views.

DR. HAMMOND—I distinctly excluded cases occurring in epileptics and restricted my cases to those in which there are no other evidences of insanity but morbid impulse.

DR. PARSONS—In those cases in which morbid impulses are the only evidences of insanity, it should be noted that the insane temperament usually exists; that there is a predisposition to insanity, either hereditary, congenital, or acquired. With a predisposition to have morbid impulses there co-exists a diminution of the normal power of self-control. All men have at times an impulse to do things which they ought not to do, but the great majority have the power to resist the impulse. They have the normal power of self-control. Their impulses cannot be considered as *morbid*. If through the influence of disease or of a defect in organization a person have an increased liability to act impulsively, with diminished power of self-control, his mor-

bid impulses may be excusable, either wholly, or in part. His impulses may be such as of themselves to furnish very strong evidences of the existence of insanity.

There is another point to which I will refer; that is, the responsibility of a person who has had morbid impulses, and who has subsequently committed an illegal act under the influence of a similar impulse. If I understand Dr. Hammond correctly, he expresses the opinion that if such person did not take proper measures to prevent the commission of the act to which he was impelled, he would in the event of its commission be equally culpable, both morally and legally, as though there had been no morbid impulse. From what I have already said regarding the nature of morbid impulse, I think it will be evident that my own opinion does not quite coincide with that expressed by Dr. Hammond. Since the existence of a morbid impulse is in itself an evidence of mental defect, acts committed under such an impulse must be less culpable than similar acts committed without the influence of a morbid impulse. The fact that the diseased party knew of his impulse to do wrong, would not restore the full measure of his responsibility, for it must be remembered that the existence of morbid impulses implies a diminution of the normal power of self-control of the governing power. If the governing power be diminished the ability to take the preventive measures required must be diminished also. This diminution in *ability* should be taken into account in the administration of the law in such cases.

Reference was made by Dr. Hammond to the influence of habit in rendering normal impulses morbid in character. In this also he is undoubtedly correct. The frequent recurrence of an emotional state may produce such profound and persistent cerebral changes as to cause a well-marked attack of insanity. It should not be inferred, however, that a person who thus becomes insane is fully irresponsible for his insane acts, because he might have controlled his passions or his impulses at a former period, and thus have prevented the final result.

DR. MEREDITH CLYMER—As Dr. Parsons has remarked, there is little to add in the way of fact or illustration to Dr. Hammond's essay.

The subject of morbid impulse covers a wide field ; but as I understand the purpose of the essay, and of this discussion, it is to consider and determine the responsibility of an individual possessed of a dominant depraved idea. This question is a very nice as well as a very important one. It may be said that a great proportion of crime, or at least of vicious acts, is the effect of morbid impulse. That is, there is a condition present in which a strong and dominating desire is felt to do an absurd or unlawful act, and a pleasurable sensation is experienced in doing it, or on its accomplishment. This state may prompt an insignificant or absurd peccadillo, an eccentricity, as well as the highest crimes. It is of moment, therefore, in the aspect which I assume we are looking at the question this evening, that the term morbid impulse should be accurately defined, that we should have a clear notion of what we mean by it, and that it should be discussed strictly within the limits of that definition.

There are, I suspect, few present who at some period or another of their lives have not been under the influence of some dominating idea, which reason forbade, and which it was very difficult to get rid of, or not to put in action. Of this sort is the sudden desire to jump off a height, or to throw one's self into a fast-running stream, or before a coming rail-train, and of like kind is the sudden prompting to say or do something absurd or wrong. Dr. H. R. Bigelow, of the Retreat at Hartford, Conn., in a recent article on "Morbid Impulses," has mentioned an instance of this kind personal to himself. At the funeral of a relative some ludicrous idea excited in him a desire to laugh ; he tried for some time to resist it by attempting to call up thoughts appropriate to the occasion. He sat, he says, for a while on a rack of unrest, the perspiration hanging in drops upon his forehead ; but all in vain. Laugh he must or go mad ; and laugh he did, just as the corpse was raised by the body-

bearers ; nor did the impulse seem in any way lessened in power by the horror-stricken faces around him.

I recollect some years ago being at the opera with a musical friend. I noticed that during the performance he took no interest in what was going on ; he seemed absent-minded and absorbed in himself. He answered any remark I made to him shortly, and did not seem to wish to be disturbed. His whole behavior was odd, and entirely different from his common conduct at such times. Later in the evening I asked him what was the cause of his singular behavior. In reply, he said, " Did you see the bald-headed man in a seat a few rows in front of us ? " I answered that I did. " Well," said my friend, " do you know, from the moment my eyes lighted on that head, that I had an irresistible impulse to smash an egg upon it ? I did my best to listen to the music — to get up another train of thought. I would look at the audience, try to follow the music, but to no purpose ; my eyes would go back to that ba'd, shining pate, and the desire to smash an egg upon it was the dominating thought. I could not get rid of it. I am sure if I had had an egg that I should have done the deed." I might mention many other instances of like kind, either within my own experience, or which have been published. You may all remember the case of the clergyman who had to repeat the Lord's prayer in the church service, and who, after the sentence, " Our Father who art in Heaven," could not go on until he had said, " and let him stay there "

But we find a class in which the impulse is of a more serious nature ; and which incites to the commission of various criminal acts, including self-destruction and homicide. It is claimed for such that they have lost the power of self-control, and are, therefore, legally irresponsible for their acts. And there lies the gist of this question. The point to be settled is, whether in any such case there is total loss of self-control ; and, if admitting that there may be, to ascertain when it happens ; when it can be considered as a proper plea in abatement of responsibility. If I understood Dr. Hammond

rightly, he excludes from legal responsibility lunatics and epileptics. And yet the general tenor of his essay, it seems to me, is in the contrary direction. While I largely agree with him as to the ability of many, perhaps most persons, to restrain their criminal impulses, and consequently admit their responsibility, still it strikes me that Dr. Hammond's proposition is too general, and its application too unreserved. Dr. Parson thinks that the degree of punishment should be graded to the degree of ability of the individual to control his acts; thus implying different degrees of the power of controlling impulse. Dr. Hammond would exclude from the benefit of at least mitigating circumstances those who, as Dr. Parson said, were unquestionably suffering from lessened will-power, and who were, at least at some time, unable to exert a sufficient degree of will to resist an impulse which they knew to be criminal, and which with this knowledge they may, at another time, have successfully combated.

Dr. Hammond says that he would except from accountability such as were acknowledged to be insane. Now, sir, as to such as are acknowledged to be insane—will the lawyer here always agree to call a person insane whom the practical alienist would unhesitatingly recognize as of unsound mind? There is, it seems to me, an irreconcilable difference between the two professions on fundamental points regarding this subject. Shall we accept the definition of what constitutes insanity, as given by the English judges after the *McNaughten* case, and which now is the law in England? This authoritative exposition of the rule of law which is to be applied when the plea of insanity is interposed by the defence in criminal cases, is now the law of this State by a recent decision of the Court of Appeals, in the *Flanagan* case, reported in 52, New York. Our judges are bound by it. Should we be governed by such an ill-founded, and unscientific, and contracted standard, great injustice would be often done. Many persons suffering from a diseased mind will be held accountable for their acts, and punished for them; for in these there may be no delusion present; and they may have full consciousness

of the act done, and knowledge of its quality ; and yet they have been forced to commit it by, as they believed and felt, a fatal necessity. An individual in such a condition may talk understandingly about the deed before its committal, reason upon, and dread the doing of it, have a horror of it, be aware fully of the consequences, and desire to avoid it, have struggled long, and for awhile successfully, against its committal, and yet finally have the will-power overwhelmed by the impulse, and be driven irresistibly to do the act he would avoid if he could. Dr. Hammond does not seem to believe that any impulse is irresistible, even in those of unsound mind ; that in every case there is a way to strive against the impulse.

In this view he will, I think, find practical alienists to agree with him. Yet he qualifies the impulse he treats of as morbid ; and as it is a mental act, its existence, the acknowledgment of such a mental state, concedes the fact of disease. Now, sir, the law as it now stands in this State as applied to the defense of insanity in criminal cases, will hold persons, as I have just stated, to accountability for their acts, and, as I believe, in many cases, most unwarrantably so, and in direct violation of our statute. We know that epileptics are especially liable to commit acts of violence, of criminal violence, under the effect of sudden, and often, perhaps, irresistible impulse. The same may happen in the puerperal state. While Dr. Hammond, as a physician, might recognize the mental unsoundness in those cases, the law of the Court of Appeals in many instances might and would not. If there should be no delusion present, if there was consciousness that the act was wrong, then the judge is obliged to tell the jury that the accused is responsible, and cannot avail himself of the protection of the statute, though every practical alienist would declare him to be suffering from mental disease. Such is the effect of the adoption of the stupid tests of insanity as laid down by the English judges.

I agree with Dr. Hammond that in many, very many instances, it is within the ability of the individual possessed with a dominant depraved idea to control it, or recognizing it,

that he should place himself where he will be unable to give it effect. It is an evidence of disease, like any other abnormal symptom, and Dr. Hammond by using the prefix "morbid" admits this. But if, failing from ignorance or negligence to do this, the impulse should become absolutely irresistible, I do not see why he should be punished. In such a state he would unquestionably be of unsound mind, the impulse would be an insane one, and such a person in such a state is unquestionably entitled to the protection which the statute gives him when he is a victim of mental disease.

DR. ABRAHAM JACOBI—I am not a member of this society, neither am I an expert in these matters, and certainly did not expect to speak upon this subject. But if you will permit me to make a few remarks, Mr. President, the first would be that I hardly know what point to discuss. There appeared to me to be, from what I heard of Dr. Hammond's essay, two distinct parts: 1st, the natural history and a complete *expose* of morbid impulse, and 2d, morbid impulse in connection with the law. If I understand the law correctly, it weighs out a certain amount of punishment for a certain amount of damage done to public morals or to the safety of human society. But in dealing out the law it is understood that the same justice should be considered, the same principle should apply, as in commercial enterprises, in which a certain sum of money is paid for a certain amount of merchandise purchased. I may be incorrect in this, but it has always struck me as justice. If this is true, if the law deals out a certain amount of punishment for certain amount or degree of crime, there must arise a question, and that question is, Whether there is a justification of a criminal act in the existence of impulse, normal or abnormal? When I heard Dr. Hammond's paper it appeared to me that he would arrive at a different conclusion from that at which he did arrive. It appeared to me a paper as of the humanitarian; as a paper of a physiologist it would appeal not so much to the so-called justice as to the greatest possible amount of leniency for all those who have the great mis-

fortune to be subject to a morbid impulse. It appeared to me as if the doctor wanted to explain and by explanation to excuse.

Now the point of view from which I consider this question is in my opinion a correct humanitarian point of view. I am of the opinion that there will be a time in the future when all these things will be taken into consideration, and when our laws will be very different from what they are now. The law of the future will be governed not so much by the principle of the jurist, as of the physician.

As far as the question of morbid impulses goes, we ought to compare them with normal, healthy impulses, in order that we may see in what they differ, or how far they agree. Take, for this purpose, the case of a little child; you place in its hands a doll-baby; he plays with it, examines it, and after examining it a long time externally, he thinks he would like to see what is inside. He takes off the dress, he pulls out its eyes, and after awhile he takes off its head, and thus he proceeds until the doll is destroyed. Now what is this? It is a morbid impulse, with a certain injury done, not to society in this case, but to its own object of amusement. This is the beginning of a morbid impulse. It is the formation of or development of a morbid habit, and operates to a great extent as a teaching of that habit; and whatever takes place in the young individual takes place in the grown person afterwards. When we speak of the functions of character or of the brain or intellect, or if we speak of psychical functions, we meet with two kinds. Intellectual functions on the one hand, and emotional functions on the other. When the intellectual functions are not very well developed we have simply idiocy or stupidity, ignorance, etc. When a person is ignorant, stupid, and does harm to himself, he is responsible to himself only, and bears the consequences. When he does harm by his ignorance to society at large, he is made responsible. Now take the same insufficiency of development, on the other side of the question, of the emotional functions. If he does harm to himself he is responsible to himself, that is, he must shoul-

der the consequences of his doings. If he does harm by reason of insufficiency in his emotional functions, the responsibility is his as long as he harms anybody else. He is morbidly emotional. We know that the more brain there is in an individual the less morbid impulse there should be. Physiologically speaking, the less brain the more reflex action. When we remove the brain of an animal and irritate the surface, the reflex action, the involuntary movements will be more powerful than they are in health; also, the less the brain is developed the more reflex action on the emotional side. The explanation generally given, that the emotional side is better developed, is more practised.

I should include not the insane alone, whom Dr. Hammond would hold responsible, but I should also include those so-called emotionally insane, the kleptomaniacs and kindred classes of monomania, unless they can be shown distinctly not to be responsible, that is, as having the symptoms of some form of genuine insanity. I have never for a moment been able to believe in temporary insanity. Whenever there is an act committed which is shown to be an insane act, that insane condition must have been encroaching upon the victim as a disease for some time. I do not deny that there are now and then cases of insanity which only exhibit themselves in what are considered to be morbid impulses. These mistakes in diagnosis will sometimes be made; but mistakes are made every day. But I believe it would be much safer to make such a mistake now and then, than to run the risks which are occurring every day. Therefore, I believe the chapter on insanity and morbid impulse in the books, should be modified to a certain extent.

DR. HAMMOND—I am glad to see that my friend Dr. Jacobi has taken an *impulse* to join in the sentiments held by myself in this respect, that this morbid impulse occurring in individuals, is liable to spread by suggestive imitation in a very epidemic sort of way. Most of the examples that I have cited went to show that this could be resisted. If we go to work and punish these people, we do a great service to other

people. We should not only look at the persons who have morbid impulses, but we should also look to society. I believe in dispensing the greatest good to the greatest number. I would not hesitate at all to hang a man, if he is proved to have committed a murder. If he was fully conscious of an impulse in that direction, and if he had struggled a reasonable length of time against that impulse, he would have conquered. A man who pleads an impulse for the first time, who kills instantaneously, I would not hang, but put under permanent restraint. If not, he may kill others. Now take this case of the man from Arkansas who wrote to me, (and which I refer to in my paper), if he had yielded to that impulse, and killed the child, I would put him under restraint for the rest of his life. And if he had disregarded my advice, and killed his child, I would have gone to Arkansas to help to hang him. This man wrote to me in consequence of having read a report of a debate on insanity, published in the *N. Y. Sun*. He knows full well to what he is subject; he knows that he has an impulse to kill his child. If he does it, he ought to be punished to the full extent. He is not insane. Would you plead moral insanity in his case, and let him go? No! Society has some rights as well as these people with morbid impulses. We know full well the force of example. Every man who commits a crime has an impulse; if he has not, he would not do it; and many have impulses and resist them. That should have no more extenuating force with a jury, than the excuse of the man who could not help appropriating another's money. If for self-gratification he commits a crime, he ought to be punished for it. I think there is a great deal of sentimentality displayed in regard to the punishment of people who are of no kind of use to society. I would not hang them all, but would put them out of the way. I am not prepared to say that I am in favor of hanging people. I would put them in charge of Dr. Parsons, and hold them in reserve in the Penitentiary or asylums built for such persons.

As a judge remarked in England, to a poor devil who stole

sheep, I am not going to have you hanged for stealing sheep, but that other people may not steal sheep.

DR. PARSONS—It didn't have the desired effect.

CLARK BELL, Esq.—The paper of Dr. Hammond is a very able paper, and as suggested by Dr. Jacobi, it discusses the subject in a terse and admirable manner.

Now when a man goes into court and is put upon trial by a jury, upon an indictment, the question of responsibility arises, which Dr. Hammond evidently invites discussion upon: What can be done with him, what measure of responsibility should be attached to a case of morbid impulse? Every man who commits a crime must have had to some extent an impulse, morbid or otherwise, controlling his action. He must have a temptation to induce him to commit the act. Is there a case in this world, or will there ever be any case, where a man conceded not to be insane, conceded to have perfectly healthy actions of mind, capable of understanding and controlling his actions in every respect, knowing the right and wrong of every act, having a full knowledge that he is doing wrong, where such a person should not be held responsible? I think not, for these things are questions of law. That is to say, as I understand it, it has been held by the judges of England, and by our own courts, that when the person was fully conscious of the wrongful character of his act, knew that it was wrong, was of normal condition, so as to enable him to correctly understand and distinguish between right and wrong, and had a perfect and free will, if he had chosen to exercise it, but who yielded to a morbid impulse, he should be held responsible. This question of responsibility is the one to which your attention is called.

Now, in the various discussions here on kindred questions, physicians are apt to arrange themselves on one side, with the same difficulties as present themselves here—rather feeling a regret that the existing law might be too severe, and that the paper may not be humanitarian in its character.

If a man has a morbid impulse upon him, so strong that

he cannot resist it, there is a question. If a man has an emotion or irresistible impulse to commit a crime against another that he cannot resist, that is a question which I think will stagger the judges, as it did those upon the English Bench. But in the ordinary cases that are presented to the Courts, there is very little question of the guilt of the accused.

DR. CLYMER :—Dr. Hammond has given us several instances within his own experience where, in one at least, there had been previous unsound mind and confinement in an asylum, where the unnatural impulse had been conquered. I would ask him if he would, in a case I will now relate, have employed the same procedure—A young married woman had exhibited symptoms of insanity for several days, with a strong tendency to self-destruction by throwing herself from a window. One afternoon, sitting with her husband, who had just returned to town, in the absence of the nurse, she complained of the heat of the room, and requested her husband to raise a window at the other end of the room. The window had been fastened down, and while he was fruitlessly trying to raise the sash, she quickly threw open the window nearest her, and flung herself out, and was instantly killed. I would further ask him, if in Dr. Skae's case, mentioned by Dr. Carpenter in his recent work on "Mental Physiology," as a type-case of the homicidal form of impulsive insanity, and which Dr. H. has quoted, whether he would hold such a person responsible? There was no delusion or hallucination; there was a simple abstract idea to kill, taking a specific form, by strangling; there was perfect knowledge of the quality of the act. There was no perversion of ideas, but only an impulse to do what the individual knew to be wrong. If Dr. Hammond should hold her not accountable, the present law of this State would. The practical alienist, in daily intercourse with the insane, meets with such cases constantly, who are as much the victims of mental disease as the most furious maniac, and as little able to control their impulses or their actions.

I do not wish to be understood as advocating the irresponsibility of all such as may have a dominant, depraved or criminal idea. But I think that we should have some clear notion on the subject, and have some rule, or test of responsibility. I cannot understand yet what class Dr. Hammond would exempt from the consequences of their acts. He has just said he would send such to his friend, Dr. Parsons, to be taken care of, or to some institution proper for their treatment; and that he would hang such, or help to hang them. By the first statement he admits them to be of unsound mind, and by the second, criminal and responsible. As I have said this evening, I largely agree with him in my belief that many cases of morbid impulse can, by proper treatment and discipline, get rid of their depraved ideas, and that in many the dread of certain punishment will hinder its indulgence.

These criminal impulses are often due to imitation. The deterrent effect of a degrading punishment has been most happily shown by the stop which has been put to attempted assaults with firearms on the Queen of Great Britain, since the passage of the flogging act. Since the offence was made a disgraceful one, punishable by whipping, there has been no attempt properly referable to depraved impulse. In a paper I had the honor to read before this Society several years ago, on "The Legal Responsibility of Epileptics," I related a case then under my observation, in which the ability, in an epileptic boy, to control the morbid impulse was well shown. Where the impulse is unquestionably the offspring of a diseased mind, which prevented the exercise of due volitional power, and where there was strictly no criminal intent, such should be accounted irresponsible. It is, after all, the power to do or to forbear. I own it is a difficult point, often, to decide, but the fact of the difficulty should not compromise a principle or a right, if the latter is properly available. Each case must be decided on its merits, and each should be closely scrutinized.

After a few general remarks by Dr. Hammond, the meeting adjourned.

“MALLEUS MALEFICARUM.”—THE WITCH’S HAMMER.*

BY M. ELLINGER, ESQ.

It is, I believe, one of the main objects of medical jurisprudence to determine the degrees of responsibility and accountability of the individual to society. Only persons of sound mind are held amenable for their actions; it is yet one of the unsolved problems how far the mind of the individual is influenced by the spirit that walks abroad, by the notions that suffuse the common atmosphere. Is mental disease to be recognized before the judicial forum, then, only when the result of a recognized diseased organ of the body, or also when the product of moral training, by which the human will becomes equally the powerless slave of habit, of encrusted prejudices, and of misconceptions, adopted by the masses as dogmatically established truths?

Every man is subject to some sort of superstition in a greater or less degree. With some superstition becomes the controlling element of their life, the motive of all actions that require a higher impulse. The tiny phantom that enters man’s fancy in his youth, becomes often a huge monster, or a spirit of benign influence, according to the surroundings which furnish the material for nursing the shadowy form. With the child brought up in the society of an ignorant community, the phantom grows into the distinct and well-defined forms of the devil and his myrmidons. With children brought up in enlightened circles, the superstitious awe and fear as-

* Read June 25, 1874.

sume other forms, sometimes so slender and indistinct as to be almost unrecognizable, but the germ is there, and its influence will be felt in some way or another. Even John Stuart Mill, one of the greatest of all modern thinkers, an intellect that penetrated the utmost limits of thought; was not free from a certain degree of superstition. In fact, the history of the human race reveals to us side by side with the wonderful achievements of the human mind and genius, such foibles and weaknesses as to offer the most complicated problem to the student of psychology.

The same law that governs the life and conduct of individuals governs that of nations. They are the subjects of prejudices and superstitions, often entirely in their power. These superstitions partake, as it were, of the character of contagious diseases, they are transferred from one nation to another, have their regular periods of rise and decline, and at times sweep with irresistible power over continents, carrying everything before them, engulfing for ages the whole human race in the maelstrom of helpless ignorance and destructive idiosyncrasy.

Moral and mental epidemics differ very little in their nature from physical epidemics. They are the children of the peculiarities that characterize the times in which they originate and grow up; certain conditions are necessary for their propagation; when these disappear the disease also vanishes. Such epidemics are found at all epochs, but none of them has borne such a distinct type of mental hallucination and aberration, none of them has taken such a decisive hold upon society, has held sway for so long a period, and was so destructive in its effects as the witch-mania. It received the stamp of judicial authority, was made the subject of statutory enactments in Germany, France, England, Spain, and even crossed the ocean to prosper for a time in New England. The most remarkable monument of human folly, judicial fallibility, and mental extravagance, is the code composed and published by Jacob Sprenger, in accordance with a mandate received from Pope Innocentius VIII., for the trial of witches,

determining the mode of obtaining and sifting evidence, and the punishment to be inflicted. The "*Malleus Maleficarum*," as the book is called, was the most terrible weapon in the hands of the fanatic, the deluded, and the bigot; under its authority, and according to the rules prescribed therein, a holocaust of victims was sacrificed to the Moloch of ignorance and superstition. If there were a devil, the period of the witch-mania would have been worthy of the Prince of Evil-doers, and certainly the inquisitors who tried, the judges who condemned, the authorities who executed with a hellish lust the judgment rendered, were the ready tools in the hands of his satanic majesty.

But before I proceed to give a detailed description of this remarkable phenomenon of ignorance and superstition in the history of jurisprudence, I will endeavor to present a rapid sketch of the history of belief in a devil and the mania arising therefrom, the belief in witches and witchcraft.

The worship of a divine Being was preceded by a worship of the being who was looked upon as the originator of the natural forces, that wrought disaster and destruction, that caused desolation and death. The dual forces, apparently manifest in nature, were ascribed by our simple-minded ancestors to two distinct beings, one of which they feared and stood in terrible awe of. He wielded those forces against which human strength proved helpless; he had to be appeased and reconciled, and was therefore the recipient of all gifts and sacrifices. This dispenser of evil is represented in all pagan dispensations and religious systems, and he has not disappeared from our churches to-day yet, where he figures prominently under the name of the devil.

The idea of a personal prince of evil is purely pagan, and its occurrence in the Jewish and Christian religious systems is due to a transfer thereto from pagan sources. The God of the Old Testament confers himself the blessings and inflicts the punishments; the same divine Being who appears to Abraham and selects him as the father of a great nation, decrees the destruction of Sodom and Gomorrah; the God who

sends Moses on his mission as the deliverer of a nation from the yoke of slavery, sends the plagues on the stubborn Egyptians. In fact, the sole foundation of the Mosaic dispensation is the doctrine of One God, as the dispenser of good and evil, who holds in the hollow of His hand the fate of nations.

It was generally assumed that the Jews, during their sojourn in Babylon, became so intimately acquainted with the Zoroastrian system, that they adopted the foreign Satan with his entire household, which of course includes the belief in evil spirits, in the power of a fallen angel, and the possibility of man to form connections with these spirits. The Ahriman of the Persian became the Satan of the Jews, and subsequently the Devil of the Christians. The belief, however, in a devil, in evil spirits, in magic and witchcraft, could never obtain a lasting foothold amongst the Jews. The Bible already says, "There is no evil presentiment in Jacob, no sorcery in Israel," and the Jewish philosophers declaimed with great earnestness against such a belief as a folly and absurdity. They were in the habit of applying the strictest logic in their metaphysical speculations. I may quote here as a remarkable evidence of the assertion which I made, a passage from one of the greatest Jewish thinkers and philosophers, whose works are still the admiration of the scholar. Maimonides, in his treatise on Idolatry, chap. xi., remarks as follows: "These things (witchcraft, belief in demons, intercourse with evil spirits) are all palpable lies, with which the worshipers of idols induced the masses to follow their lead. Jews must not believe in them; they are too wise to indulge in such follies. They must not think that there is some substance in it because the subject is mentioned in the Scriptures, 'There is no presentiment in Jacob and no sorcery in Israel.' Those that believe in it and similar things, as something essential and possible of accomplishment because the Scripture includes them in its prohibitory enactments, are fools whose minds are unsound. Wise men know by unmistakable proofs that these prohibitions refer only to a prev a

lent folly, and the Torah warns against them.” These are the words of a Jewish thinker who lived as early as the twelfth century.

In the Christian dispensation the devil became an important personage, and those that permitted themselves to fall in the meshes of the archfiend of human perfection were doomed to perdition. However, the belief in the efficiency of witchcraft and the injurious power of witches is of later growth. This mania could only assume such gigantic dimensions in an age in which the germs of mediæval ignorance budded forth with all the luxuriance which a soil could offer that was fertilized by the supernaturalism and miracle-worship of an ignorant and corrupt priesthood. The belief in witchcraft is already indicated by St. Augustine, who in one of his works said: “The sorcerers live in a certain communion with demons, and, as it were, have a covenant with them.”

Simultaneously with the growing cultivation of saint and relic worship in the eighth, ninth, and tenth centuries, the belief in witchcraft became more general. The first instance in which females were accused of witchcraft, occurred in the twelfth century. The crowning of Richard Cœur de Lion was preceded by a proclamation forbidding the presence of Jews and women, the latter, because they were suspected of practising witchcraft. In the works of Gervasius Hilberiensis, and of Cæsarius Heisterbacensis,* who wrote in the beginning of the thirteenth century, the growing belief in witchcraft is distinctly reflected; the former speaks of impure devils, of female and male demons who incite boys and girls to commit acts of indecency. In one place he says: “I know women in my neighborhood, who confidently asserted that at night, when their husbands were asleep, in the assembly of witches they soared in rapid flight over the sea and passed over the world. Those who pronounced the name of Christ, no matter at what

* *Gervasiū in Hilberiensis Otia imperialia in Leibnitz Scriptor, Brunsvic, tom. i.—Cæsarius Heisterbacensis Libri XII., de miraculis et visionibus suo tempora in Germania factis in Betrandi Tissier bibliotheca patrum cisterciensium.*

place, however great the danger, tumble down. I have seen a woman in the kingdom of Arelat, a native of Beaucaire, who fell into the water of the Rhone, from a like cause; she came home at midnight, her body soaked through, without fatal effect, but much depressed with fear." The evil became greater, the malady increased as soon as heresy and sorcery were confounded with each other. A number of old women were burned in Treves between the years 1230–1240, charged with having visited the *scorpion*. At that time the belief arose that the devil assumed the shape and form of certain animals, in which he appeared to his faithful devotees. The cat has been very unfortunate, as being notably suspected of serving the devil and his servants as a convenient disguise, and there are thousands and thousands of people to-day, yet, who look upon a black cat with superstitious awe. In the fourteenth century the mania became already so strong as to find a place in the judicial proceedings; witches and sorcerers were handed over to the jurisdiction of the court, and ecclesiastics as well as worldly potentates made the utmost use of it, if they desired to rid themselves of unpleasant and troublesome personages. The most celebrated procedure was that against the Knight Templars, an order which had rendered great services to the church militant. Their members had the reputation of leading a life of singular purity. Philip the Beautiful conceived a prejudice against the order; he feared their influence and coveted their wealth, and he resolved to suppress them. Their officers were charged with having repudiated God and Christ; with having served the devil and practised sorcery. They were put to the rack, and while under torture confessed having committed the crime; only their Grand Master, James de Molay, and Gui, remained firm to the last. Fifty-nine of them were put to death in one day, by being roasted alive at a slow fire. The trial lasted from 1309–1313. Another illustrious victim of this mania was the renowned heroine of Orleans. She was burned in 1431, at Rouen, having been condemned as a witch. The sentence against that noble woman, who had rendered such signal ser-

vices to her country, was pronounced by the Theological Faculty of Paris, who at that time were the leaders of thought and morality.

Time does not permit me to dwell longer on the period preceding that of the introduction of the "witch's hammer."

The belief in the power of witches, in witchcraft, demons, were-wolves, vampires, and all the various shades of a diseased imagination, was the growth of many centuries. But it was in 1484 that the seal of ecclesiastical authority was stamped upon it, in the celebrated bull issued by Innocentius VIII. This pope, a man without culturē and of dissipated habits, was induced to publish that edict at the request of German inquisitors, who, on the part of the bishops and civil authorities, met with difficulties in their examination and condemnation of persons suspected of witchcraft. "There are persons," the bull reads, "who want to know more than would be necessary, who even have the audacity to maintain that people dare not be punished for such crimes." This bull, which formally establishes the procedure against witches, says: "We have lately been informed, not without great sorrow, that in some portions of Upper Germany, in the provinces and parishes of Mayence, Cologne, Treves, Salzburg, and Bremen, in towns and villages, are found persons of both sexes who, unmindful of their own salvation, have fallen away from the true faith; they cohabit with demoniac incubes and succubes; they injure and ruin, choke and destroy by magic means and with the assistance of the devil, new-born infants, the young of animals, the fruits of the earth, the grapes of the vineyards, the fruits of trees, yea, men, domestic and other animals, vineyards, orchards, meadows, places of pasturage, seeds, cereals, and other produce of the soil; they torture men, women and cattle with violent interior and exterior pains, make men impotent, and hinder women in bringing forth, and prevent both in the performance of their connubial obligations." Power and authority is then given to three monks, Henry Institor, Jacob Sprenger, and John Gremper, to spy

out the crimes of sorcery, to punish and exterminate it wherever found. Bishop Albrecht, of Strassburg, is commanded to give protection to the inquisitors, and to punish each and all that might seek to lay an impediment in their way, that would contradict or oppose them, whatever their office, dignity, position, nobility, or station might be.

This papal instrument was the most terrible weapon in the hands of the fanatical and bloodthirsty inquisitors; there is no better evidence of the fiendish cruelty with which they used the power conferred upon them than the *Malleus Maleficarum*, a code of laws according to which those suspected of witchcraft were to be adjudged. The first edition of that remarkable book was published in Cologne in 1489, five years after the publication of the papal bull. A second edition followed thereafter in 1494. Four more editions were published, of which the last was printed in Frankfort, in 1580.

The "Witch's Hammer" is divided into three parts. The first part disposes of eighteen questions relating to witchcraft in general; of the effects produced by the devil through the medium of witches; of children that are the offspring of demons; of witches and the manner in which they injure the people; of the sexual intercourse; of the metamorphosis into animal forms; of witchcraft-practicing midwives, who injure the fruit in the womb, procure premature births, and consecrate the infants to the devil. Sprenger was evidently no friend of the female sex. The sixth question of the first part of the book contains an elaborate treatise on the predominant inclination of females toward the practice of witchcraft. He displays all his erudition and logic in order to establish his assertion; he quotes from pagan writers, from Scripture, and the fathers, in proof of the vices and weaknesses of women. Three things, he says, are incapable of practicing moderation: the tongue, the priest, and woman. Speaking of divorce, he says: "It is not advisable to marry; because what else is woman but the enemy of friendship, an unavoidable punishment, a necessary evil, a natural temptation, a desirable evil, a domestic danger, an enjoyable

injury, an evil of nature covered with beautiful colors." After such an introduction, and remarking *en passant* that there are exceptions to the rule, he gives his argument why women are given more readily to the practice of witchcraft than men. Women are more credulous, he says; they are constituted of less tough material, in consequence of which they can more easily be imposed upon; they have a slippery tongue, are hasty in their conclusions, quarrelsome, and envious.

In the second part of the "Hammer" he treats of the means of guarding one's self against the different snares and effects of the witches. This fills sixteen chapters, and the questions how the spell of witchcraft can be broken, solved, and nullified, occupy eight chapters.

The third part of the "Hammer" forms the procedure proper. This part is divided into thirty-five chapters or questions. They are the more important because they were the basis of all future regulations in the treatment of witches. The first question is, how the prosecution is to be instituted. The judge may, without any formal complaint, without information, on the mere rumor that witches live in such and such a place, institute proceedings *ex officio*. Regarding the number of witnesses required, the rule is laid down that in the mouth of two or three witnesses the truth may be found. The judges, however, are exhorted to practice caution. The third question, whether a judge may summon witnesses, compel them to make oath as to the truth of their testimony, whether he may subject them repeatedly to give testimony, is answered in the affirmative. The fourth question is, What must be the character of the witnesses? There may be admitted as witnesses, people under the ban of excommunication, accomplices, persons having committed an infamous crime, runaway, good-for-nothing servants, even heretics against heretics, witch against witch, wife against husband, children against parents, sisters and brothers against sisters and brothers. According to the fifth question, it is established that enemies who were proven to have

sought the life of the accused, are not admissible as complainants or witnesses, but if the enmity is not of a deathly intensity, the testimony may be admitted as of semi-validity; but if in corroboration of the testimony of another witness, it is of full import. Among the questions to be submitted to the witnesses and the accused occur the following :

Whether she knew that people considered her a witch? Why she showed herself in the stable or in the field? Why she touched the piece of cattle or one of the children? How it happened that immediately thereafter they were struck with disease? What business she had in the field when the thunderstorm arose? How it happened that her cow gave more milk than four or six cows of other people taken together?

Also the following questions : Whether she set houses on fire by means of conjuration? Whether she dared to bring on thunder, hail, and stormwind? Whether she had the audacity to poison the air, the water, and the pasturage? Whether she did not produce impotency and prevented women from bringing forth? Whether she did not ride into the cellar with her companions and spill and spoil the wine? Who the persons were that she instructed in witchcraft and sorcery? In what manner she rode to her nocturnal meetings with the demons?

The seventh question treats of the subject, whether the accused is to be adjudged a witch, and what evidence was required to declare her a convicted witch. To the eighth question,—how the witch is to be brought into arrest,—the advice is given to lift her from the ground as soon as you obtain a hold of her, that her heels do not touch the ground, by which means she might secure her liberty. In section nine it is decided that it is left to the discretion of the judge whether to give to the accused the names of the witnesses to be brought forward or not. From the answer given to the tenth question : How the defence is to be regulated, and whether an advocate is to be admitted, we ascertain the danger that attended those who undertook the defence of a

witch. If the advocate defended his client accused of heresy with greater vigor than was judged proper, he himself was subject to an indictment? The eleventh section provides, in case the names of the witnesses are withheld, how the advocate is to conduct the defence. The twelfth question is : How a mortal enmity is to be ascertained?

The judges are admonished not to hesitate in resorting to any trick or subterfuge in order to embarrass the culprit and to confuse her; they are told that in the interest of religion everything is permitted. I mention yet the following headings of the questions treated: How the judge is to act before the process of torture is actually begun; how far it is to be proceeded with on the first day, and whether the promise of life may be held out to her, in order to induce her to make a voluntary confession.

The next chapter is on the continuation of torture, by what signs and marks the judge may recognize the witch; what precautions are required against the influence of the witch under torture; and how her silence, the effect of witchcraft, may be broken.

Another chapter treats of the time and the mode of procedure on the second trial. Speaking of the means of purification of which a witch may make use, the fire test is advised against, because the devil is a thorough adept in the science of herbs, and he may give her some decoction of herbs that protects against the effect of fire. I will not tire you with a further description of the various subjects treated of; enough has been given to show that there is no more humiliating evidence in history of the deep fall of human intellect, if it abdicates its throne in favor of an idea or a conception on the authority of mortal man alone. This code, written in blood, was the legal instrument under the authority of which thousands of human beings were sacrificed to the idol of superstition and ecclesiastical fanaticism. It demanded its victims in every civilized country: even in the age of Shakespeare, under the rule of so enlightened a ruler as Queen

Elizabeth, the tribunal for the trial of witches was kept in full blast under the legal protection of the government.

The mania of witchcraft had such full possession of society, that the best and most enlightened of the race were under its ban. It was held in such horror and dread, that the crime of witchcraft was deprived of those privileges which the law granted to the worst criminals. Judges and inquisitors not only deemed it permissible, but mandatory, to disregard the usual forms of judicial procedure, and to treat the unfortunate victims of a deluded society with inhuman cruelty. Old women, idiots, lunatics, were in the greatest danger of becoming the subjects of fear, and of being denounced as witches. Nor was it advisable to express a free thought; a heretic was equivalent to a sorcerer. Once denounced and on the black list, the victim could only escape by a miracle.

The zeal of the witch-hunters had no bounds. The bigots had the sympathies of the people, and an auto-da-fé was one of the greatest amusements and diversions of the period. It is almost incredible to what an extent the poison of moral disease may spread and affect a whole community. The disease has not died out yet. It is only a few years since a Catholic priest in Bohemia wrote a work on exorcism, and the baptismal ritual in many a religious sect contains the formula of exorcism. If the information is correct, witches were burned in Mexico a few weeks ago, and it is impossible to say that at some future period some deceived fanatic may not infect a whole community, and induce them to revive temporarily the horrors of the old belief in witchcraft, demons, spirits and the like.

These moral epidemics spread with an inconceivable rapidity and affect communities otherwise not given to credulity. Did we not witness in this country the persecution of a class of people, the Freemasons, by the whole community, because some persons spread the report that they were dangerous to society in general? Do not thousands of people pilgrim to out-of-the-way places because a foolish girl with an unusually

fervid imagination claims to have seen or been in communication with heavenly beings? Is not miracle worship recognized yet as a religious worship compatible with our age, our ideas, our advanced civilization?

Hygienic measures, quarantine regulations cannot stop the sources of these diseases; they can only be eradicated by clearing the soil in which they alone can prosper, that of credulity and ignorance; education and knowledge are the only agents that can purify the atmosphere in which such abnormal appearances are possible. If I am permitted, I will at some future time give a sketch of the history of the period of the persecution of witches, the character of the various delusions under which the various communities seemed to labor, and of the pseudo-sciences that for a long time figured in the annals of culture as a real knowledge, such as alchemy, magic, kabbalah, and others. It requires a cooler temperature to dive elaborately into subjects that exhaust the patience of the audience as well as of the lecturer.

THIRD INAUGURAL ADDRESS .

OF

CLARK BELL, Esq.*

GENTLEMEN:—It would be impossible for me to conceal from you my high appreciation of the very great honor and distinction which has been conferred upon me by the Medico-Legal Society of New York, in calling me again, for the third time, into its chief seat, and of that kindness which has marked this act on your part with such unanimity that it will always be remembered and cherished by me with the liveliest gratification and gratitude.

In assuming again the responsibilities and duties of your presiding officer, I cannot forbear to thank you all for that great and uniform encouragement and support which has everywhere and on all hands among you been extended to me ; which has invested my duties and efforts on your behalf with such a charm, that it has lightened and lessened the labors of my office, and on many occasions rendered them a delight and a pleasure.

MEMBERS.

I congratulate you, gentlemen of the society, on the accessions that have been made to the roll of your membership during the year that has just closed.

The present roll of resident or active members of this society now contains 348 names.

The death of Alfred Vogel, of the University of Russia, leaves fourteen names on the roll of your honorary members, with six vacancies ; in filling these great care should be ob-

* Delivered November 27th, 1874.

served by this society, as it should be made a position of great distinction and worth.

Your roll of corresponding members now numbers twenty-nine.

I take great pleasure in recommending for honorary membership, MM. Guerard, member of the Academy of Médecine of Paris, France, who was elected president of the Société de Médecine Légale de Paris, in December, 1872, and who was one of the original founders of that society, which was organized in February, 1868.

MM. Guerard has always been an active and conspicuous member of that body for years before his election to the presidency, a member of its permanent commission, and a physician of distinction in the city of Paris, who has devoted no little of his time to the study and solution of questions involved in the science of medical jurisprudence.

LABORS OF THE YEAR.

During the past year this society has accomplished no little work. The discussions that have occurred at your sessions, and the varied and useful labors in which you have been engaged, have been such as to maintain the high standard you have hitherto established.

One of its most important labors has been the compilation and publication in a bound volume of some of the earlier papers read before this society, with a historical statement of its origin, rise and progress.

This interesting and valuable result has been accomplished under the care, supervision, and labors of a committee of your body, and is just published by J. R. McDivitt, Esq., one of the most enterprising of the law publishers of New York, who furnishes it to members at the wholesale price, under an arrangement originally made with him by this society.

The present volume, which will well repay your purchase and preservation, and which confessedly must enrich the

literature of medical jurisprudence, will be followed during the coming year by another and similar one of a like character, which will bring out the papers read before the society that have passed the committee on publication down to about the present time. I esteem this work an important and notable part of the labors of this society, of very great value upon medico-legal questions, thus made accessible to the world, and I particularly commend it to every member of the society, as meriting his countenance, support and encouragement, so that these publications may become a permanent and established feature in the future of this organization. The thanks, as well as the material support, of members are eminently and properly due to the enterprising publisher, and I can not dismiss this subject from your consideration without also publicly thanking in your name our worthy member, R. S. Guernsey, Esq., who has devoted great pains, time and labor to the successful accomplishment of this very important result.

LIBRARY.

I owe you all apologies for great neglect of my duty in not presenting more forcibly and persistently the cause and the merits of your library, which has been duly organized and started upon a successful basis, since I first had the honor of assuming the chair of this society.

The contributions from members in money and volumes have continued in a way that assures us of the ultimate success of the effort, but are not equal to nor commensurate with the hopes or desires of your president, nor the importance and merits of the enterprise itself.

When gentlemen reflect that so small a sum of money as \$5,000 would immediately, and probably within the present year, enable us to purchase nearly every work on these subjects, and aggregate the best library of medical jurisprudence that could be found anywhere, I am obliged by what I consider my duty to call upon you, gentlemen of the society, to

again take into consideration the propriety of raising this sum, either at once or speedily.

If it is thought advisable for any reason not to attempt it all now, let one-half be raised the present, the residue the ensuing year. There are certainly men enough now among our own numbers who, if they could be induced to make the effort, would at once raise this sum, without an appeal to the two professions outside of our membership.

But so grave is the imperative and immediate necessity for a complete and comprehensive library in this city, which should embrace every known work on medical jurisprudence or its kindred topics, particularly in the English, French and German tongues, that this society cannot be true to itself or its duties if it neglects to secure the early accomplishment of this very desirable result.

If this society should feel justified in permitting the general public to co-operate with its members in this work, under some arrangement by which every contributor of a bound volume accepted by the society should be entitled to the use of and access to the library, it would probably add a considerable number of works each year to the shelves of the library, if it did not immediately accomplish the desired purpose.

The general resolution originally adopted at the time the library was founded, making it the duty of every member to contribute annually at least one bound volume thereto, has been of very great value and importance in adding to its catalogue.

Quite a considerable number of our members have, with great care and punctuality, attended to the discharge of this duty, whose contributions have been acknowledged from time to time, but your president regrets that he is compelled to report that a large number of members are delinquent in this very important respect.

Allow me, in closing this part of my remarks, to remind members that if this duty was promptly and annually discharged by every member of this society, a few years would

give us a library on medical jurisprudence alone, second to none in the world, even though no immediate steps were taken at once to secure these volumes by an appeal extraordinary, as at first suggested.

Let every member, then, who has neglected to send the volumes, attend to it at once, and add to a library which has already become quite valuable, and is probably now the best in this country for reference on these subjects.

I append a list of contributions of volumes and money contributed since my last announcement, with the names of the contributors.

LEGISLATION.

The changes that have been made in the laws of this State, during the past year, are of the very gravest character concerning the custody, care and treatment of the insane, and the trials of insane persons, especially where the defense of insanity is interposed.

The prominence that has been given to the discussion of these varied questions in this society has had a large influence upon this legislation, while the labors of a very distinguished gentleman, alienist, and an honorary member of this society, have probably been more immediately instrumental in securing these changes than all other causes combined.

The codification of the statutes of the State, upon this subject, as this legislation was styled, for which we are so much indebted to the services of Professor John Ordranax, embrace radical and fundamental changes in the whole system, and revolutionized from beginning to end the whole theory and practice in such cases.

The evils that had been charged upon the old system, of the commitment of persons alleged to be lunatics to an asylum, and the wide spread conviction that under the former system gross abuses might have been and were sometimes practiced, were probably causes for an excited public opinion that demanded a change and inclined to one that should

throw greater safeguards around the liberty of the citizen, and make it more difficult if not practically impossible to cause the incarceration improperly of any person as an alleged lunatic, who was really of sound mind.

While the practical working of the new law is at first criticised severely by medical men and practitioners, as being almost impracticable and unnecessarily difficult, and doubtful in cases of insanity, where prompt action is necessary, it may well be claimed that a fair trial of the new plan should be made, with patience, with care and without feeling, before we condemn it finally and demand its revision or its repeal.

Passing all the multifarious detail of the many changes made by this important statute, it may be well to allude briefly to the radical one in relation to the plea of insanity by or in behalf of persons charged with crime in the criminal courts.

It was a matter of grave concern, in the administration of justice in the courts, for the punishment of offences, whether the defence of insanity, so often interposed as a plea in defence or justification of alleged crimes, was not undermining public confidence in the administration of justice, by its well known abuses, and by its being used improperly for the escape and acquittal of well-known criminals, of acknowledged or generally accredited guilt. The very great uncertainty that immediately surrounded a capital case, when this defence was interposed and insisted upon, was well known, and had resulted in a gradual withdrawal of public confidence in the then existing laws upon this subject.

The change made in the new statute strikes at the root of the whole evil. It practically does away with the defence of insanity, if formally pleaded as a defence to the indictment, or attempts to do so completely.

To guard against the conviction and punishment of insane persons, the old statute is re-enacted and perfected so as to have an investigation into the sanity or insanity of the accused, as a separate and independent proceeding from the trial of the indictment; and thus leave the question of the

guilt or innocence of the accused to be tried by itself, if the indictment ever comes to be tried, which in the case of an alleged lunatic must always follow such a preliminary investigation.

I regard it my duty merely to advert to this comprehensive and remarkable change in the law of this State, which is thus put upon trial before the eye of the whole nation. If the workings of this law shall upon trial be on the whole fairly decided to be an improvement upon the old and previously existing systems, it cannot fail to have a very prominent and beneficent effect in initiating similar changes in the laws of other States.

But gentlemen should not be in too great haste, nor impatient of a little delay before arriving at positive opinions, particularly if against the change now inaugurated, until a fair trial and test of its workings can be had.

It is not improvable that before a definite and decisive solution of the question involved can be safely reached, some minor changes, suggested by trial and experience, may be necessary, and the aid of the Legislature invoked to give the proposed plan a perfectly fair trial.

That the important step has been taken, that the new system is now really upon its trial, no matter how much of inquiry or criticism it may excite and awaken, cannot but be a source of congratulation to the Medico-Legal Society of New York, nor to the thoughtful men of this society, who have been interested and engaged in the discussions and questions therein involved, and who have taken part in the passage of the new statutes.

OTHER SOCIETIES.

We have received, during the past year, the publications of "*La Société Medico-Légale de Paris*," with whom this society is proud and happy to continue on terms of most friendly intercourse, and in correspondence.

The volume, of some 500 pages, issued by our sister society

of Paris, being *Bulletin*, Tome 2, contains records of the years 1870-1872, commencing with the address pronounced by M. Devergie, at the February session of that society in 1870 on the occasion of his retiring from the Presidency, and the Inauguration Address of his successor, M. Bèheir, on the occasion of his accession to that office.

The volume, closing with the election of M. Guerard to the presidency, in December, 1872, may be called the record of the notable transactions of that society, during the two years of the presidency of M. Bèheir, one of the most distinguished of its members, and an honorary member of this society. This volume, the fruit of its labors, is most valuable, and reflects the very highest credit upon that body. It is a most notable and brilliant monument of the value and importance of that society in the French capital, and to the progress of scientific investigation upon medico-legal questions abroad.

As this work is not yet translated into English, and I am not aware that any other copy has come to our members save the one sent to this society and now in my hands, I trust you will bear with me, while I allude briefly to the general character and work of our sister society in Paris for the period since December, 1872.

The Medico-Legal Society of Paris has investigated on various occasions, through a committee of its members duly appointed by the society or its president, interesting questions upon very many subjects, as they have arisen from time to time, in France, either in the civil or criminal courts, or from their own correspondents; some of the most interesting cases of poisoning, of infanticide, of medico-legal discoveries concerning blood, of tattooing, upon the question of identity on a mutilated dead body, many of which have been discussed with great skill and ability, and are therein chronicled.

The work also contains most valuable and interesting papers, reports upon the French law of insanity, and reviews of legal proceedings where medico-legal questions were raised and discussed.

Allow me to quote from the very short but most excellent address of M. Bèheir, pronounced at his inaugural, a few sentences of which will give you his idea of the duties and position of the Medico-Legal Society of Paris, and which I think will be most pertinent also to the members of the Medico-Legal Society of New York. M. Bèhier says:—I translate, but not literally—

“One other cause of the success of our society is certainly the creation of an intelligent, permanent commission ready to respond to all questions submitted to it.

“This is an excellent organization, for it constitutes a perfectly disinterested tribunal upon medical questions in judicial affairs.

“The advice which your permanent commission brings to your knowledge, and frequently to your judgment, is in effect based upon the purely scientific appreciation of the circumstances and the surroundings which constitute the medico-legal question presented for your consideration.

“Neither the influence of the prosecution nor of the defense can intervene here, it can know and will investigate only the absolute, and almost the abstract research after truth, the second term in that device which you have adopted.*

“Gentlemen, this service is not the only one which the organization of this society is called upon to render. It is still useful from another point of view. The constitution of our work, in fact, unites upon a common field of labor, the medical man, the magistrate and the member of the bar. This is a useful intercourse, and one the results of which will be very important. If we see one another more we shall know each other better, and will better appreciate the inherent qualities of each, as well as the peculiar characteristics of each class of our members.

“Sooner or later this community of labor will tend to re-

* “Science—Vérité—Justice.”

move that antagonism which it must be conceded actually exists among the magistrates against the physicians.

"In pursuing our investigations, seeing how we proceed, why we are thus united, and on what labors we rely, the magistrates will give us more of their confidence. They will recognize that the legitimate honest medical man, such as they will always select, is more detached from popular clamor than they are apt to give him credit for; that the conscience which he brings to his mission controls him absolutely; that he desires to thoroughly understand all sciences germane to the question which he examines; they will recognize that it requires tact and system, attention and care, to assist in the application of that solid scientific knowledge, which is in fact indispensable. Let us understand better who we are, what we do, what we know, and they will accord more value to our conclusions, and a more benevolent attention.

"They will above all learn, what has not been generally understood by magistrates, that not every physician necessarily understands medico-legal questions; that it requires more than a mere diploma as a doctor of medicine to examine these subjects, that the opinion of physicians should not be seriously opposed to the opinion of an accredited and qualified expert, that it requires special studies to be able to fully understand the questions of forensic medicine, and that certain of these questions necessitate a study and practice of these specialties.

* * * * *

"The labors of our society will serve to enlighten those whose mission it is to apply the law.

"To be frequently united upon a common plane of study is a circumstance which will tend to smooth away the difficulties I have mentioned. It will also be, in my opinion, an important result if our society unites the two professions, equally independent.

"In the times in which we live, and those to which we tend, if we can unite and close up the ranks of all honest men, we will accomplish a pious and social work.

“In order, gentlemen, to attain this elevated object, the role which our society must play is definitely traced and closely defined. I have heard it stated in one of our discussions, ‘Do not let us place ourselves in opposition to the tribunals; let us take care that our opinions are not rejected, or we lose our authority; let us sacrifice something to success; let us occupy ourselves above all with questions in which our opinions may obtain consideration, and be treated with respect.’

“I am not of that opinion. I believe that our society should investigate in all simplicity, in all conscience, every question that is brought before it, detached from all personal consideration or interest. We must advance courageously without leaning on any other support than that of science and of common sense.

“I know only a few who have for their motto, ‘Do well and let people talk,’ but I believe that for individuals as well as bodies of men it is the best rule of conduct.

“Truth has its power of evolution, which overcomes all obstacles, whether created by its enemies or its imprudent friends.

“To do well, without looking to the immediate results, will bring honor and credit to our society; perhaps the time may be long deferred, but premature fruits are not the best; and only those which are grown in due season, and are the fruit and growth of wisdom, are worthy of our preservation, or will permanently endure.”

Bulletin, Tome 3, a work of some two hundred pages, has also been since received, which chronicles the labors of that society, under the presidency of MM. Guerard, from his inauguration in January, 1873, to the 8th of December, 1873, the last meeting of the society in that year.

This volume announces that the Government of France, in a decree, promulgated on the 22d of January, 1874, by the President of the French Republic, has formally recognized that society as established for the public good, and its stat-

utes and regulations as formally approved by the Government of France.

The society has assumed the name of "Société de Médecine Légale de France," and its constitution, rules and regulations form one of the most important and interesting portions of this volume of its transactions.

The Medico-Legal Society of New York congratulates its sister society of Paris on this fortunate result, which cannot fail to be of signal service and benefit to that society, and must largely increase the sphere of its usefulness.

The papers published in Bulletin, Tome 3, embrace a very interesting class of cases, among which are several relating to murders, infanticides, suicides, and various other crimes.

Among those papers also is an interesting one upon the subject of chloroform as an agent in the commission of crimes, being the report of M. Dolbeau, where the whole subject is ably and critically considered, and was made the subject of discussion in the society at its session of November 10th, 1873.

The views formerly expressed by S. Rogers, M.D., ex-president of this society, upon this subject, are therein quoted and discussed, but the conclusions reached by M. Dolbeau do not entirely agree with those of Dr. Rogers in that class of cases.

The advance made in the French capital in the science of medical jurisprudence, through the agency of this active society, has been decided and gratifying.

It has also been our good fortune to have received the announcement of the organization of a similar society to our own, and upon a like basis, in the city of Cleveland, Ohio.

We have received a copy of its published plan of organization, with officers, constitution, by-laws, etc., and feel an honorable pride in receiving from this young and vigorous society the credit of having inspired its organization for the investigation of the science of medical jurisprudence in that city.

I take great pleasure in recommending that the Cleveland

society be furnished with all our publications, and that we should in all ways in our power be glad to aid in its prosperity and success.

I venture to recommend that our new and forthcoming volume be sent in addition to all the sister societies, to the leading libraries abroad and in our own country, and I trust soon to see inaugurated in the city of London, a Society of Medical Jurisprudence which shall occupy, in Great Britain, the position which the Paris society does in France, and our own society in this State and nation. I shall be disappointed if Berlin and Vienna do not shortly inaugurate similar movements in those cities.

THE RELATION OF SCIENCE TO MEDICAL JURISPRUDENCE.

The advance that science is making in the domain of medical jurisprudence cannot fail to excite your liveliest interest.

Toxicology has become one of the most valuable aids and agents in detecting, convicting and punishing crime, and the extended efforts as chemists of such men as Prof. Doremus, Prof. Chandler, in our country, and Tardieu, Caspar, Mayet, and Devergie abroad, have awakened and encouraged investigations which cannot fail to be of lasting and permanent value to mankind.

When science does intervene now in the cases of detection of poisons by chemical tests she is valuable because, and only when, she is certain. If her voice is to be listened to at all convincingly, it must speak with unerring precision. It is either demonstrative, or it is valueless. The science of toxicology is as accurate and absolute as mathematics, and when demonstration comes debate ends, doubt ceases, and conviction must follow. We should never regard mere theories as proofs. We may debate them, examine and discuss them in their varied forms and bearings; submit them to tests, fancied, difficult, and even crucial, but, when life, character, liberty or property are at stake, mere theory ceases to be of value. We can only accept the actual, the real, and

the unquestionably certain. Science should have an eye of flame clear as the sun, but no heart, no emotion, no fear, no passion. If she points her finger, it should be as the needle to the pole. It must not even vacillate, it must not vibrate, for the result to be accepted as absolute. No leaning of the intellect, no warping of the judgment, no kindling of the heart or affections, no appealing to the passions, the loves or the hates, but cold as the frost, and far reaching and clear as the ether of eternal space. Science leads, if she leads at all, unerringly, unmistakably, and with precision, or she is no safe guide in the domain of medical jurisprudence.

EXPERTS AND EXPERT TESTIMONY.

To speak a language, we must learn it.

No one can practice a trade that has not learned all its deftness and intricacies by study and practice. The hand that has acquired skill and tact, and cunning, for a certain task, has only come to it after long labor and many trials.

So no physician should dare call himself an expert in any branch involved in medical jurisprudence or scientific investigation, until he has studied it to its foundations in its abstract principles, and carefully prepared himself besides by practice and actual contact with it in all its phases, peculiarities, and idiosyncracies, pursuing it into every detail.

It is not enough to know the nature, character, names and antidotes of the various poisons, nor to understand theoretically their varied tests and methods of determination.

Many men of both professions have a very good general knowledge of these theoretically, as learned from books, reading, and observation.

That chemist who, knowing all this, before he attempts to swear, when life and death are in the balance, should have taken all these questions, all these tests, to his laboratory, and worked out one by one every problem for himself, before he is competent to speak with precision to a court or before a jury.

Mere opinions of men are becoming daily less valuable, especially on scientific questions.

The more we attempt to rely or to build upon them the more painfully uncertain do we become of our premises, of our foundations.

The experience of both professions in that class of cases in our courts, when the opinions of medical witnesses only are given, has doubtless been akin to that entertained by the community at large, and helped to shake profoundly the public confidence in them at all.

Counsel submit usually, or frequently in the same case, contrary opinions from medical men, of apparently equal learning, skill and opportunities, upon the same apparent state of facts. For example, in the case of Geo. Francis Train, Drs. Hammond, Clymer and Parsons pronounce him insane, though they have no previous acquaintance with or personal knowledge of him, and base their opinion upon one or two interviews and conversations; while Drs. Finnell, Peugnet, Gardner and others pronounce him sane on similar examinations, and the jury usually balancing the medical testimony, as in that case a panel of the sheriff's jury, having a large experience in such cases, are governed by their own judgment, or the testimony of those acquaintances and friends who are and have been long and intimately acquainted with the party who is the subject of the investigation.

And this case is but a sample of similar evidence in other cases of more or less public prominence.

We must strive to approach nearer by careful study, preparation and skill to certainty. So long as facts only go towards conviction and to formation of opinions merely, these opinions must be accepted with great care, and their weight or importance must be conceded to be of little value.

We do not want opinions, we want certainties. We have nothing but doubts left if we gain as the result of scientific research or inquiry only convictions or opinions.

In the toxological test if the result is not absolutely certain we reject it wholly.

There are more or less bearings and indications in many of the experiments which fall short of certainty, but which are not wholly valueless as evidence, still in such cases we reject all if the result is not absolutely certain.

Let us emulate and establish that standard. It is safer. The teachings of pure science have not merely a charm; they have more; she rewards her devotees: she smiles upon the patient worker, and the truth lies at the bottom of her profoundest depths.

We must then invade and dig and work for the hidden, but we must know, recognize and acknowledge it only when it stands fully revealed. No man, no matter what may be his profession, his apparent standing, or his theoretical or book knowledge, until he has completely mastered the particular subject upon which he is called to testify, as well in its theory as in its practice, is safe to be classified as a competent expert.

Medical jurisprudence, on its medical side especially, is full of specialties.

The medical expert should be a specialist in the widest, broadest, best sense of that term.

The more learned he really is, the more careful, thorough, complete and comprehensive will be his examination of a subject.

His analysis should be fundamental. If we are to deal in opinions only, the opinion of such a witness is valuable; but the more profound the expert the less we shall have of his mere opinions. He will presently deal only in facts. Has he found certainly the truth? Is it certain, absolute, demonstrable? He then can speak, and convincingly. Is he groping in the case, as one in the dark? Does one set of symptoms indicate this, another that?

Is he in doubt, or does he balance facts and weigh them and attempt to offset them, the one against the other? Then we have only doubt; and if opinions are the result, why should they not differ, as men always will differ?

I know, of course, the rule established in our courts, under

which, in certain cases, the opinion of experts upon a given statement of facts is permitted to be given; but the whole spirit and philosophy of the law is tending to establish this class of legal evidence on a more solid and substantial basis, and to make it a means of arriving at truth, and to aggregate facts, rather than to cloud and embarrass a case in the mazes and uncertainties of the diverse and contradictory opinions of medical men.

In that remarkably lucid and masterly address delivered by Prof. Tyndall before the British Association of Science, at its recent session, which has awakened so much of interest and discussion on both sides the sea, we find that very learned and brilliant man and thinker, in reviewing the philosophy of Lucretius and his opponents of that and the present time, bringing foremost and prominent into the discussion those grave questions so intimately related to our studies of insanity, diseases of the brain, and mental phenomena, concerning which many members of this society who have given the subject of mental diseases and peculiarities much thought, are at a loss and differ in their conclusions.

Are aberrations of the reason an affair of the material brain? Is mental disease a brain disease? What is the true nature of the soul of man? And what its relation to his physical structure?

In that admirable debate, between the pupil of Lucretius and Bishop Butler, author of the world-renowned "Analogy," these problems, which have puzzled the alienists of our own and past time, are placed by Prof. Tyndall in a most masterly way, to investigate whether the mind of man, and his intellectual and reasoning faculties, are a part of his physical being, or whether the body is the mere tenement of the spirit in which it dwells while life remains.

You who have read and studied this paper cannot fail to have noticed how prominent a part this inquiry takes in that remarkable discussion, and to what ends Prof. Tyndall's reasoning might carry these propositions if it be conceded that madness is solely and only the result of a physical disease

of the brain, as is claimed by many of our abler alienists. I draw a wide line of demarcation between the actualities of science—between its demonstrable facts—and between the inductions, the theories and the speculations of science.

I have no hesitation whatever in proceeding with the inquiry suggested by Prof. Tyndall, to which allusion is given above, by any and all scientific aids, but we must not accept opinions or theories for facts.

Let us pursue the investigations with courage, but with patient persistence, and be prepared to accept results when they are demonstrated only, and when doubt no longer remains.

Is the material and physical brain the instrument of the mind of man? Is it the true seat of reason? Is it a machine—one through or by which the will acts and the faculties develop and exhibit their functions and powers?

Or is it, *per se*, a force, a part of the physical existence of man, in no wise separated or capable of separation from the physical body? Is the soul bound to the physical, and does it therefore terminate and end with the sleep of death?

Doubts from a scientific point of view, prove nothing. They are at best but negative testimony, and in a case where something is required to be demonstrated, some fact established, mere negative testimony is of little or no value.

The deductions of science, or the theories depending on such deductions, of which the whole field of scientific and philosophical inquiry is so full at the present moment, must not be mistaken for, nor confused with, its demonstrable facts.

We cannot be too careful in pursuing our investigations in the domain of science; or, in the study of its minor or greater problems, in waiting and hesitating, and in absolutely refusing to accept as truth that which often times seems to be true, or which may be true, or which even is generally conceded to be true.

Indeed mere belief that a certain thing is probably true, or really true, is nothing.

We need not, as has that talented and brilliant professor, attempt to apply the laws and tests of physical science in the domain of the intellect, or of the beliefs and faiths of mankind, for science has little if anything to do, and can necessarily have little to do with matters of faith or of theology, but we need or should not hesitate from any considerations or fears in following the most thorough, absorbing and careful examinations into all the issues within the domain of medical jurisprudence ; for no matter where we find or how we find the real truth, we may not fear to avow or embrace it.

There may be those who fear to pursue these or similar inquiries to their legitimate sequences, through a fear that some result might disturb settled convictions or opinions, but such fears are wholly unworthy, and should not for a moment control any rational or thoughtful mind. I have never for one moment feared the result of any scientific test, examination or trial, upon any of the questions involved in the matters of my own opinions, faith or convictions, and I should not regard the faith, opinion, or the convictions of any man of value, who did fear to submit to any tests that science could really make. A faith that could not stand such a test would be unsafe and unreliable. The great danger is, in accepting those indications or leanings which sometimes appear to be the teachings of science, for scientific facts ; and if we examine in this manner and upon these subjects without great care, we are in danger of being led into the very mazes of doubt, uncertainty and daze in our investigations of medical jurisprudence which Professor Tyndall describes as his own state, in regard to abstruse metaphysical questions which he has in vain sought to expose to scientific tests and demonstrations.

I cannot better conclude what I have to say upon this subject than to introduce an extract from a letter from M. P. Volpicelli to M. Chevreul, read before the French Academy, and which came to my notice since the above was written, which appears in the *Comptes Rendus* of August 31, 1874, a

translation of which is also given in the October number of the Psychological and Medico-Legal Journal. M. Volpicelli says :

“We must not forget that the characteristic *truth* in sciences belonging to the dominion of natural philosophy is *demonstration* ; and that, unfortunately, in other sciences of this dominion (mathematics alone excepted) the principal facts that constitute them are not connected except by propositions more or less probable, which escape demonstration—the impossibility to pronounce one’s self *à priori* on the question of knowing whether a proposition advanced as new is true or erroneous

“And again there is a distinction, too often forgotten, between exact facts, gathered from experience or observation, and the interpretation given to them—a distinction so well drawn up by a profound genius:—*phenomena alone affect our senses, the mind alone discovers the causes*, from which the consequence—the *experimental method à posteriori*, which I have just defined—should only be applied to the *interpretation* which has led to *experiments or exact observations*, for it is undoubtedly this *instigation*, this interpretation, which, if correct, forms science.

“It is this *distinction* of facts, *observed to be exact*, and the *interpretation given to them*, which, according to my idea, are not sufficiently known so as to be admitted into the interests of real progress, such as *scientific experiments* and, I may add, *the science of observation*.”

OBJECTS, PURPOSES AND AIMS.

The Medico-Legal Society, gentlemen, can not, in any sense, be properly called, and should not be regarded as a medical society. It is rather a scientific than a medical society. Composed of gentlemen selected from the body, in the main, of the two great professions of medicine and law, it is not organized for the purpose of taking issues upon any of these questions which excite interest, or divide the medi-

cal profession, as such, or which interests only the legal mind, but it essays to discuss and investigate such questions as relate to the science of medical jurisprudence, and to throw light upon the path of the lawyer, court or jury, in the investigation before legal tribunals, when the aid of the scientific medical expert is needed to explain, to demonstrate, or to enlighten.

As for the physician, this society should aid, encourage, and instruct him in preparing himself for such investigations in the courts, as well as to enlighten him in the multiplied cases now constantly arising where the member of the medical profession is brought into contact with the administration of justice, and to fully explain and define his relations to the laws of the State.

My own idea has been to place this society on the basis and standing of a general scientific society. It is not, and for some time past has not been limited strictly to the two professions of law and medicine. It has been thought advisable to widen it; to embrace eminent chemists, whether medical men or not, for their value upon questions of toxicological science and investigation.

It is, as I think, wisely conceded that men who might be called eminent in either science or letters, if interested in the domain of medical jurisprudence, would be a valuable acquisition to this society.

A gentleman of this city, of large intellectual attainments, considerable research, and who devotes his life to scientific and intellectual pursuits, neither a lawyer nor a physician, contributed a paper to this society last season, which was read, and that gentleman, by the unanimous action of the executive committee of this society, passed into the list of its active membership.

I should hail the acquisition of such men a great gain to such an organization as the Medico-Legal Society. Upon this subject, however, I only advance my individual opinions, and so far as I understand them, those of the legal profession in the main. The celebrated M. Divergie, when retiring

from the chair of the Medico-Legal Society of Paris, speaking upon this very subject, says :—I translate as before—

“In all scientific societies two conditions are usually requisite : homogeneousness in the studies and labors of each of its members ; a simultaneous course, in order to advance that particular branch of scientific study which the society represents.

“Our own has no analogy with its older sisters, save that general and common purpose, the progress of science.

“It differs from them not only in its composition, but also in the end which it seeks to accomplish.

“Contrary to usage, its elements are all heterogeneous.

“It represents a fortunate conjunction of law, of medicine, of the veterinary art, and of the sciences of physiology, physics, chemistry, and natural philosophy.

“Forensic medicine is almost a borrowed science. It is not absolutely and by itself self-existent, but appeals to that universality of science on which it stands.

“Nothing is foreign to it ; its progress, like its practice, combines all these elements.

“But it is in its practice that it reveals itself as an art, by the specialty of its interpretations, its diagnosis, its prognosis, and the light by which it makes clear the facts after we have seen them from a distinct point of view.”

The Paris society started on a broader, more catholic, and wider platform than we did. In addition to law and medicine, they opened their doors to veterinary surgeons, to all scientists, to physiologists as such, to physicists, pharmacists, chemists, and naturalists.

They place themselves upon the broad standard and basis of a general scientific society, and we shall make a grand forward and upward step when we emulate them in this respect and dismiss forever from our thoughts all questions of the peculiar ethics of either profession, leaving them in full force in societies purely medical for the government of medical men, and societies purely legal for the government of legal gentlemen.

We are of necessity a homogeneous, and in no sense a medical society.

We are united for the investigation of the science of medical jurisprudence, and we should be glad to welcome the light of truth, of reason, or of science, no matter whence it comes, so long as it be the truth, real light, and not "science falsely so called."

In one other respect have we not given the same or as much force, prominence or attention as our Paris confrères, especially of late, that is, to the examination by a commission of our members of interesting pending questions of public or private interest in the courts.

The influence of this society in the case of Schoeppé, was doubtless of great benefit to prevent what might have been properly termed a legal murder.

I venture to recommend this very interesting and prominent field for your further labors, advising that same courage, patience and care in the investigations so forcibly recommended by M. Bèheir and which will not only increase the usefulness and importance of your labors, but make them vastly more instrumental in the accomplishment of good and the acquisition of scientific knowledge and research.*

Again thanking you, gentlemen, for the renewed expres-

* I append an extract from the Statutes of the Medico-Legal Society of France, which provides for its permanent commission, which is undoubtedly one of its most important agents :

TITRE IV.

Commission permanente.

ART. 17. Une Commission permanente, composée du Président du Secrétaire générale et de neuf Membres titulaires, est chargée de recevoir dans l'intervalle, des séances toutes les demandes d'avis motives qui peuvent être adressées à la Société, et d'y répondre immédiatement s'il y a lieu.

ART. 18. La Commission permanente se réunit selon les besoins et délibère d'urgence dans l'intervalle des séances.

ART. 19. Les décisions de la Commission permanente sont prises à la majorité des Membres présents, elles doivent réunir au moins quatre voix.

ART. 20. La Commission permanente peut selon la nature des questions à résoudre s'adjoindre un ou plusieurs Membres de la société.

sion of your continued confidence, evidenced by my re-election to this chair, so wholly unexpected and unlooked for by myself, I resume the duties you have so kindly committed to my charge, trusting for the same kindly aid in the future which I have so generously received in the past.

ART. 21. Les décisions de la Commission permanente n'engagent pas la société ; elles lui sont communiquées à la séance suivante.

ART. 22. Les Membres de la Commission permanente sont élus au scrutin, par la société. La durée de leurs fonctions est de trois ans, et la Commission est renouvelée par tiers tous les ans.

HINTS FOR LEGISLATIVE REFORM.*

By JNO. R. DOS PASSOS, ESQ.,

OF THE NEW YORK BAR.

It is recorded by Montesquieu, of the despotic reign of Czar Peter, that whilst the subjects of that prince were privileged to petition the throne, it was only upon pain of death, if their requests did not seem reasonable to his tyrannic mind.

Under such a rule petitions were, of course, very few, and the grievances and distresses which the people suffered, never coming to the imperial ears, remained unredressed.

Whilst no such direful consequence as this author describes awaits a citizen of this country who may timorously, or however boldly, venture to submit his views to the law-making power upon questions of general concern, there do seem to occur periods of time when the public mind is so disturbed and excited upon the apparent increase and boldness of crime in our midst, that, to suggest any measure, no matter how deeply grounded in justice and humanity, which may possibly be used in the defence of an accused person, is to subject one to the pillory of newspaper criticism, which if it does not kill as promptly and surely as a Russian execution, inflicts a slow and patient torment, to some minds hardly less endurable.

I would not by these remarks be understood as condemning this sentiment of the people, which prompts them when crime stalks defiantly and unabashed in their every-day presence, to loudly demand that the machinery of justice should

* Read December, 23, 1874.

be worked promptly and without the retardance and encumbrance of legal technicalities, because it is but the ebullition of honest passion, and it has its intimidating and beneficial effect upon the minds of bad and evil-disposed men.

These outbreaks of public sentiment, if I may so call them, moreover test the strength and capacity of the regular organs of judicial administration; they act as a strain upon the legal system; they open to us an accurate diagnosis of our legal constitution, its weaknesses and insufficiencies, and by the aid of this knowledge, if it is correctly applied, we are enabled to make further strides towards that limited perfection in human government which the fallibility of man allows us to attain. Despite the cries periodically conducted to our ears through the medium of the press, that the administration of justice is loose and uncertain, and of the accompanying admonition that the reins of the law must be shortened and tightened on offenders, I say, notwithstanding these things, the history of criminal jurisprudence teaches that slowly but surely the tendency of legislation has been, and is, to reduce and ameliorate the punishment and grades of offences. The "community"—that meaningless, irresponsible, but omnipotent power which exists everywhere when measures are to be advocated and pushed, but cannot be found when responsibilities and mistakes are to be shouldered—the "community," history shows, which to-day thunders for vengeance, to-morrow plaintively beseeches for mercy and leniency.

Here is the proof: In England at the close of the eighteenth, and far into the beginning of the nineteenth century, there were 124 crimes punishable capitally.

Take but a short leap of time and we find that both in England and in this country there exist now but substantially two—treason and murder—to which the death penalty is attached.

When we consider the development and finished civilization of the English nation at those very modern periods, does not the mere recital of the statistics provoke a feeling akin to horror?

Is it not startling, that in the most advanced nation of the earth, in the eighteenth and nineteenth centuries, in an age illuminated by the living wisdom and philanthropy of a Burke, a Wilberforce, a Howard, and a Brougham, and a galaxy of the brightest intellectual stars that ever shone in the firmament of human science, that in such an era the statute-books were disgraced by a law which made it a capital crime punishable with death to break down the mound of a fish-pond, so that fish could escape? or to cut down a cherry-tree?—a law, which if it had been enforced against him, would have consigned the large and respectable body of George Washington to the common hangman, and his immortal name to ignominy and contempt.

Then the punishment of felonies not merely involved the life of the offender, it entailed disgrace and obloquy upon his name and progeny, and sequestered his property to the crown.

Now there is no such thing as legal corruption of blood—the business of corrupting the blood of the human family being left to the medical profession—and the only forfeiture of property inflicted is after outlawry, upon conviction of treason, and then only for the life of the traitor and no longer.

The lips of persons charged with crime, once hermetically sealed, are now opened, and the accused may give testimony before the jury in his own behalf, and thus bridge the chasm into which many a poor victim has fallen by his failure to unravel circumstances which no living soul could explain but himself.

It was only as recent as last year that the legislature changed the law heretofore prevailing in homicide cases, in relation to what was called *instantaneous premeditation*—a doctrine which laid down the idea that a man could premeditate murder in the wink of his eye whilst pulling the trigger of a pistol—a rule not only logically but etymologically and intellectually incorrect. But in deference to a humane sentiment this rule has been changed, and the law now is that the

premeditation necessary to constitute murder must be a *deliberate premeditation*—if you know what that term signifies—*deliberate premeditation*—because I confess that I do not—but I suppose it means a *linked premeditation long drawn out*—a deliberation that commences at the feet, and then, circumnavigating the body, works slowly up to the brain, where after resting a while and surveying the cellular organization, it becomes premeditated.

But seriously, except in very clear and heinous cases of poisoning, this law of 1873, although not in terms, practically abolishes murder in the first degree and its hanging appendages, and substitutes imprisonment for life ; because a man must now be shown to have deliberately brooded on his intent, like a hen sitting on eggs, until he hatches premeditation. *At least* it abolishes the idea of instantaneous premeditation, and substitutes a more humane theory.

I do not find fault with the general effect of the law ; Heaven forbid ; for whilst infinitely more humane, it is not so ridiculous as the old law, which allowed instantaneous premeditation, which you can understand if you ever saw a white blackbird, or witnessed the still more frequent phenomenon of its raining upward.

But are the people of this State prepared to thus *impliedly* abolish capital punishment ? because, as I have said, that is the practical effect of the law of 1873, so far as tested.

For myself I believe that the maintenance of that doctrine is essential to the preservation of the security and lives of the people. And as for the right of society to deprive men of their lives, aside from the Divine authority thus directly given from the summit of Mount Sinai, thousands of years ago, I base it upon the ground that it has the same right to take the lives of criminals as it has to shoot down its enemies in war—both acts being alike committed for the preservation of the social system, without which men could not exist.

Nor am I influenced against my belief in this doctrine by any arguments based upon the supposed humanity of confin-

ing a man to prison for life rather than to deprive him of it. The most cruel and barbarous torture you can inflict upon a human being is to immure him within the four walls of a prison for life. The laws of physiology and psychology alike protest against it. Often such an imprisonment results in outright insanity; it always deprives a man of every conceivable object and end for which a wise Creator ordained his existence.

It is better and more humane to cut off the life than thus to prolong it in constant misery and despair. But beyond all this, the hopes of pardon, most always realized, and the chances of escape, render the doctrine of imprisonment for life too uncertain and unsafe an exchange for a rule which has thus far been a most effectual safeguard against the dire results of the worse promptings of the evil passions of greed or revenge.

Let the legislature adopt a reasonable practical rule, which places the intention to murder midway between the doctrine of instantaneous premeditation, on the one side, and deliberate premeditation, as it is called, on the other, and which will establish as a basis of the jury's determination the *actual existence of premeditation*, as that term is understood. Until this is done the law of murder will be uncertain and unsatisfactory, and will provoke unnecessary criticism and dispute, which a subject of such grave importance should be free from.

Returning from this digression, I might go on and multiply beyond your patience other improvements which have from time to time been made in the system of criminal law; but these are enough to show that although we hear these oft-repeated cries in favor of more severe and rigid punishments, the quiet and steady course and progress of the laws have been to ameliorate and reduce them.

For nothing is better settled than that severe and dreadful punishments do not check criminality; and the judge who constantly and indiscriminately inflicts the extremest penalty of the law is either lacking in a knowledge of the principles

and objects which underlie human punishments, which is disgraceful ; or, having such knowledge, and in defiance of it, he shapes his decrees to the fashion of an ephemeral and versatile public temper, which is contemptible ; or, he is lacking in heart and deficient in sympathy for his unfortunate fellow-men, which renders him unfit for the position.

But, on the other hand, there is nothing more difficult than to determine how far the other side of severity, and this side of mercy, human punishment should extend. It is a problem too much neglected to be solved.

Notwithstanding this progress of the law which I have so cursorily traced, the State is still a debtor to persons accused of crime. The exact question is, shall the account be still further reduced ? It is practicable at this juncture of comparative peace and good order to lessen the indebtedness ?

I do not propose to go over the whole account. I only point out some of the items. The subject covers the entire area of the social organization. It runs into all the ramifications of human affairs. Its full consideration would require a review of the whole scope and theory of the doctrine of human punishment and of our criminal system.

Permit me to say here that I do not think it can be truthfully affirmed that crime is encouraged or fostered by surrounding accused persons with reasonable barriers of safety. I know that the loose or corrupt administration of justice is calculated to increase crime ; but where the scales of justice are evenly swung, no danger occurs by conferring upon persons charged with offending the law every reasonable opportunity and means to establish their innocence. Though guilty men will, and do, use the presumptions and rules established to enable innocent men to vindicate themselves of unfounded accusations, yet that is a fault which must pervade every system of justice worked by general principles ; and the wisdom of mankind has not yet been able to establish any other fair mode for running the social machine. We see this in the administration of the civil law ; dishonest men every day evade their just engagements and liabilities by invoking to their aid the general principles of the law.

A Chinaman once invented an instrument to shave men by steam or wind power. It did very well as long as it was used on the faces of his diminutive countrymen ; but when it came to be applied to the tall Englishmen and Scotchmen it took off their heads. It was a "general principle" system which inexorably required that some should be sacrificed for the good of the whole. So it is not a fair argument against any rule of law that it may sometimes be used by bad and guilty men to escape the legal and righteous consequences of their evil deeds.

The origin and fountain-head of crime must be sought for in another direction.

Wars, for instance, are hotbeds where crime is nourished, and when peace comes, and the armies are about melting again into the bosom of civil society, she blooms out into a thousand dazzling and seductive shapes, and her poisonous fragrance permeates and affects all grades and classes of the population.

In all countries the criminal thermometer is high after wars, and our own experience is, that after an unexampled decade of unheard-of vices, official peculations and embezzlements, the mercury is just beginning to point to a temperate degree.

So idleness is a god of high repute in the temple of vice. The populace should be kept constantly employed—by the State, if necessary—which owes to all of its children and subjects succor and support.

Idle-mania is a disease which costs only pence to prevent, but pounds to cure. *The Legislature should look to this.*

If I were asked to-night to designate one method of preventing crime, I should say stop the promiscuous and indiscriminate publication of criminal and court news in the daily papers.

This is a very delicate and difficult question to deal with, but it is one, nevertheless, which is fraught with deep interest to those who are concerned in studying the sources of crime, and the time has come when it should receive practical treatment.

I imagine that there are very few sensible, thoughtful men who have not more than once deprecated in their own minds the free and full publication of this species of news, and they have doubtless been perplexed when they have come to consider how this fast growing evil—for evil I think it must be conceived to be—might be remedied.

The distinction between the *liberty* and *license* of the press is most always so close and refined; the jealousy with which the people watch any movement to circumscribe the limits and scope of journalism is so deep and anxious, that the arguments in favor of a reform which may curtail its domain must be very strong and substantial to receive any countenance or support.

According to the law of this State, no reporter, editor or proprietor of any newspaper shall be liable to any action or prosecution, civil or criminal, for a true and fair report of any judicial, legislative, or public proceeding. So far as that statute is concerned I have nothing to say. The newspapers have the unquestioned legal rights to publish much, if not all, that appears in their columns. I speak not of strict right or power, therefore. I base what I have to say upon the idea of expediency—of the comparative benefit to the community of the doing, or abstaining from, certain acts.

Now I think it will be generally conceded by all fair-thinking men that the detailed and embellished publication of all matters appertaining to crime and criminals is mischievous and hurtful; mischievous to the administration of justice; hurtful to individual members of the community.

The momentous, absorbing, and infinitely difficult point, the *vexata questio*, is, to extract that which is poisonous and weakening from that which is wholesome and nourishing.

“*There’s the rub.*” and to do this, moreover, without infringing, or in anywise invading, the sacred precincts of a “free press.”

Now I believe that the main objection to the publication of criminal transactions is that they familiarize the people with crime; that they imperceptibly but unavoidably lessen

the respect of the subjects for the law and its punishments; that crime is so showily and attractively presented; its authors are made so prominent, and are honored with such infinite attention, even to the point of dignifying their most insignificant utterances with the permanency of print; the history and surrounding of the offence are so ingeniously and elaborately woven, "that crime loses," to amplify Burke's well-known apothegm, "half of its evil" and disgrace, by losing all of its terror as well as "grossness."

The strength of the law consists in robing it in factitious forms, which from the distance impress the subject with awe and fear. It is true the vindictory or punitive power is necessary; but when the "authority behind the throne" is invoked there is always danger. It is the gilded figures of justice, the solitary, awe-inspiring judge, and the formal surroundings of a court that, after all, constitute the strength of the law; the *posse comitatus* is never called into action, and when it is needed, and the bare forms of the law prove inefficacious, we know that the very life of the State is threatened.

It is said by Plutarch of Alexander the Great, that one day he dashed into a river alone and unaided, and by the mere power of his fame as a military hero, put to flight an army of one hundred and fifty thousand Persians who lined in battle array the opposite shore.

There were thousands of men in that army who were individually able to overcome him, and yet they fled to a man before the halo of fame which enveloped this renowned military hero.

So with the law; its inherent weaknesses are covered with an indescribable and invincible charm of power.

By making crime familiar to the people, that is, by a constant graphic and extravagant describing of the details of criminal transactions; by constantly unfolding to the public with romantic description the various processes of criminal jurisprudence, the terror and dread of offences are lessened, their enormity and heinousness wear off, and the whole standard of public conscience and morals is lowered.

It is a well-known statistical fact that in England, of a stated number of men executed for crime, a large proportion of them confessed that they had been constant spectators at similar scenes. And one of the most beneficial and humane measures ever adopted was to make executions private, because it has been indisputably shown that the mere witnessing of such horrid spectacles was calculated to accustom and harden the people to crime, and to lessen the dread of such necessitous measures.

Yet is it not true that the graphic and vivid pen descriptions of these awful scenes with which the papers abound, and where the minutest detail is recorded, and the most trivial words of the poor victim noted, as if they were to serve as landmarks for some future event—is it not true that these recitals are calculated to produce almost the same effect?

How many sensible men are there in the community who would not willingly consent to forego reading such news as this? how depraved is the appetite of him who gloats and revels by the hour over such reading, as if he were enjoying the most delicious titbits of literature?

Professor Doremus, in his interesting paper on Toxicology, read before the society a few meetings since, suggested that, in cases of poisoning, during the examination of experts the public should be excluded from the court room, because much is necessarily said that is unfit to be heard, and hints are frequently given in respect to new discoveries, and in the use of poisons which might often be improperly and dangerously used.

The suggestion is eminently wise, and the courts, without the aid of legislation, have the power, in the exercise of a wise discretion, to carry it out and exclude the public on such occasions.

But how insignificant are the evils of giving such testimony before a small audience, to publishing the proceedings broadcast throughout the land in the columns of newspapers?

Nor is it in poisoning cases alone that testimony is given which is unfit and unnecessary for publication. Nor is it alone to cases in court, but out of court, that the suggestion is applicable.

All that vast volume of reading which is well known as "sensational," in which private individual affairs, of no earthly public importance, are elaborately gone into and portrayed in the luxuriant language of romance, is subject to the same criticism, because it tends to deprave and vitiate the tastes of the people, and thus pave the way for more corruption and crime.

I do not go into details, and point out the precise literature which is objectionable. I do not see that anything is gained by such a course—to say nothing of the extent and limits of the subject. Nor have I overlooked the invaluable aid which is rendered by the newspapers in the cause of justice; nor, indeed, have I forgotten how often the premature publication of news obstructs it.

I advocate the largest liberty of the press. No argument could induce me to believe that a free press is not a necessary element in a democratic, in any liberal government. It has not only been a handmaid to progress, education, liberty, and science—it has been a pioneer which has led us on to the attainment of the noblest position among the civilized, Christian, enlightened nations of the earth. I would not detract one jot or tittle from its glory, or seek to circumscribe its limits and scope. I would cleanse and purify it of its dross, and leave it a bright and golden sun, illuminating the paths of men to a nobler and purer social existence.

But how can the defects I speak of be remedied? How can we avoid the Scylla of a licentious, and at the same time steer clear of the Charybdis of a muzzled and a fettered press?

I would leave this difficult question to the press. Let a board of censors be appointed from its own members to weed out from the columns of our daily journals all obnoxious reading; they have the knowledge, the discernment, and capacity,

and, I have no doubt, they wish, for, after all, they but minister to the tastes of their supporters.

But, failing this, I should not hesitate to appeal to the legislature for aid against that which I consider to be slowly but surely undermining and deteriorating the tastes, manners and morals of our entire people.

I now turn to a topic about which this Society has manifested the deepest and the most praiseworthy interest—the subject of “Insanity.”

At the last session of the legislature, it will be remembered, an act was passed whose aim was to revise and codify into one complete body all the laws upon this subject, and, where defects were supposed to exist, new laws were added.

From what I am about to say, I do not wish to be understood as thinking that this question of insanity did not need the attention of the legislature, nor as condemning or disapproving the spirit which led to the adoption of the present laws; nor do I mean to criticise the entire scope and body of this act of 1874. I have only to remark upon one or two sections of the act, which appear to me to work an anomaly and inconsistency in the regular administration of justice, and which I think calls for speedy revision.

The 30th section of article second of this law provides that “Whenever any person in confinement under indictment for the crime of murder, etc., desires to offer the plea of insanity, as a general traverse, and his whole defence to such an indictment, he shall present such plea at the time of his arraignment, and at no other stage of the trial but this shall such plea or defence be received or entertained by the court; and the court before whom such trial is pending shall have power, with the concurrence of the presiding judge thereof, to appoint a commission to examine such person, and to inquire and report to the court aforesaid upon the fact of his mental sanity AT THE DATE OF THE OFFENCE with which he stands charged. The commission aforesaid shall institute a careful investigation, call such witnesses as may be necessary, and for that purpose is fully empowered to compel the attendance of witnesses.”

“Upon the report of said commission, if the court before whom such indictment is pending shall find that such person was insane and irresponsible at the date of the offence with which he stands charged, *the court aforesaid shall order his removal to some State lunatic asylum*, there to remain for observation and treatment until such time as *in the opinion of a justice of the Supreme Court*, it is safe, legal, and right to discharge him.” Now my objection to this section is, that it palpably infringes the constitution of this State, and of the United States, by interfering with, and depriving an accused person of, that venerable and sacred institution, as it is called, of a trial by jury; and that it is therefore entirely illegal and void.

It says in substance that when an accused person tenders the defence of insanity, which he must do at the time of his arraignment, *the court shall appoint a commission* to examine such person, and to report to the court whether *he was sane at the time of committing the offence*.

If the commission finds that he was insane at that time, the court shall order his removal to some State lunatic asylum, there to remain until, in the opinion of a *justice of the Supreme Court*, it is safe, legal, and right to discharge him.

I say this provision is palpably unconstitutional and void, because it substitutes a commission for a jury of twelve men.

It is true that under the common law the courts have claimed and exercised the power of determining *preliminarily* by commission as to whether a prisoner was insane and unfit to be tried, and out of the same humane and benign spirit they have also examined by the same means into the same question *after judgment*, because the law would never execute its decrees upon an insane man, on the familiar presumption that although convicted he might still have something to say why judgment should not be pronounced and carried into effect.

But this law of 1874 substitutes a commission for a jury upon the *principal* and *main* trial, and places it in the power of

that body, whose number and character are alike indefinite and uncertain, not merely to inquire whether the accused is insane *in presenti*, so as to be unfit to be tried, or sentenced, etc., but it empowers the commission to determine his *condition at the time the offence was committed*.

Now, "insanity" is as good, and as well recognized a defence to an indictment as any other known to the law; it is based upon the *want of will*; without which no crime can be committed. It has its origin and source out of the same general fountain-head from which all criminal pleas flow—infancy, self-defence—in all of which cases, from different reasons, the *will does not join with the act*.

And it follows, therefore, that the legislature has as much power to say that when a person interposes the defence of an alibi or infancy, it should be referred to a commission, as it has to say that insanity should be so treated.

Then the commission is authorized to examine the accused. If this means an interrogation—and such an expression doubtless includes such an idea—it is unconstitutional for the additional reason that that instrument declares that a criminal can never be forced to testify in his own case. *Accusare nemo debet se nisi coram Deo*.

It is no answer to these objections to say that a judge who appoints a commission will always nominate twelve men, for by the statute he has the power to appoint less—no number being mentioned—it invests him with an arbitrary discretion which he would be justified in following.

Besides, the law contemplates a jury selected in the proper way—not by a judge—duly drawn for that purpose—it gives the right of challenge—it says that the accused must be present, and judged by well-settled rules of evidence—all of which barriers are swept away before the power of a star-chamber, inquisition-like, commission.

Then suppose the accused is found to have been sane at the time of the commission of the offence? The statute does not provide for such an occurrence. What will prevent the defendant from insisting that the determination and conclusion

of the commission are erroneous and trying the whole question over again?

It is a well-settled rule of law that the report of a commission of lunacy can always be shown to be erroneous, and unfounded.

No, gentlemen, like Hamlet's offences, "there are more objections to this law than I have thoughts to put them in or imagination to give them scope"—objections as fatal to this legislation as strychnine is to the human system. Convict a man under such a law, and the judgment, when it comes to be examined by a cool, contemplative, unbiassed court of review, will be as worthless as the paper which it soils.

And yet the people constantly cry out that the machinery of justice works slowly and produces unreliable, unsatisfactory and uncertain results.

Do they pause to inquire where the fault is?

Do they know that hasty, reckless, ignorant legislation is the true cause of all the trouble?

That it is not in the administration of the law, with its forms and processes nicely and exquisitely adapted to ascertain and mete out justice to its subjects, that the fault is to be found, but that the blame should be traced to the men who seek to handle subjects which they do not understand, and who are called legislators.

Nor is there any just reason,—returning again to the subject,—why there should be any different system and form adopted in cases where insanity is presented as a legal barrier to conviction than any other known and accepted defence.

Has this defence been perverted and misused? Has it been used as a cloak by which criminals have escaped, so that it is sickening and nauseating in the sight of the people?

That would be no reason. Look at the defence of an "alibi"—to prove which perjuries have been heaped upon perjuries, mountain high, and yet no language can be found sufficiently deep with meaning to express the injustice and inhumanity which would prompt the people to deprive a man of the privilege of showing that he was not present at a time

alleged, and could not have committed the offence alleged against him.

Where, again, is the fault to be ascribed which has brought this defence of insanity into disrepute ?

Does it not originate out of a class of cases where a strange sentiment of honor prompts a husband, a brother, a father to shoot down the seducer of his wife, or sister, or child ?

And do not the men who cry out against the defence of insanity go into the jury-box and acquit that class of criminals, who are perfectly sane and clear-headed, in deference to this sentiment ?

Charge not, then, upon the forms and administrations of the law defects which the makers of the law—the people—themselves occasion.

And change not the machinery of the law, which is adapted to all conditions and phases of society, because the people cry out against the evils of which they are the authors.

One more suggestion and I am done. It is, that the legislature should confer upon the courts the power to grant new trials on *the merits* in criminal cases.

As the law now stands, the courts are powerless to grant new trials, no matter how contrary to the evidence, truth and justice the verdict may be. And this rule is grounded upon a supposed assimilation of our criminal courts with the criminal courts in England, which, in my estimation, is entirely false and unfounded.

The courts now only have power to grant new trials in criminal cases where an error of law has been committed by the judge ; but for the errors, mistakes, or ignorance of juries there is no redress or appeal.

In a civil case involving any question of property, no matter how insignificant, the courts have the power to grant new trials on the merits ; but in an issue involving a human life, or the happiness, good name, or liberty of a citizen, they are powerless to interfere.

This presents a spectacle at once inconsistent and anomalous, utterly indefensible, and calls for prompt redress.

Only a few years ago a man might be convicted, and there was no power to grant new trials, even though an error of law might have been committed. That was remedied, however, and a bill of exceptions was introduced—to this day unknown in England in a criminal case—and a defendant was allowed to present his case to be reviewed upon questions of law.

All that is wanting now to make the law harmonious is to confer upon the courts the power to set aside verdicts when contrary to the facts.

It is not enough that the Governor has the power to prevent very great injustice by the exercise of the pardoning power. In the case of Foster, Governor Dix refused to interfere, although the jurors, in recommending the prisoner to mercy, swore that they would not have consented to have rendered any verdict which would deprive the man of his life.

A citizen who is innocent has a fundamental right to be declared so by the proper legal tribunal, and he should not be thrown upon the mercy of an executive to beg for that to which he is entitled as a matter of right.

The judicial records contain many cases where the courts have interfered to set aside verdicts of juries in civil cases, rendered against the evidence, under the pressure of strong prejudice and excitement.

How much more strong the reason for conferring this power upon them in criminal cases, about the details of which the community is generally roused to the highest pitch of interest, and where there is so much danger—especially in these times when men are allowed to sit as jurors who have previously formed and expressed opinions—of juries being led astray by prejudice and passion?

We want some competent and impartial tribunal to stand as a barrier between an accused person and an excited and indignant populace, with power to set aside as for naught, results which are manifestly unjust and erroneous.

You have it in civil suits. I say abolish the unjust dis-

crimination and confer it in criminal cases; for as long as human life is of as much importance as inanimate things, and personal liberty is of equal value with money, the discrimination is untenable and cruel.

The statistics are unusually interesting and forcible upon these subjects—it would seem irresistible.

There are forty criminal cases reported in ten of the last volumes of our Court of Appeals Reports, the highest appellate tribunal known to the law. Of this number the court reversed nineteen, and affirmed twenty-one, thus showing that nearly a moiety of these convictions were erroneous and invalid.

If this number were reversed for legal errors, is it not probable—nay, almost certain—that many persons are convicted upon insufficient evidence, and that the law is powerless to relieve them?

Some years ago, in a report of one of the British Commissioners appointed to investigate the subject, Sir Frederick Pollock states, that in a particular nine months, six persons convicted of capital crimes at the Old Bailey were, upon investigation of their cases, after they had been convicted, found to be innocent.

The inference drawn by the commissioners from this investigation showed that the frightful number of ten executions a year of innocent men, in the city of London, might have been prevented, if the court before whom the conviction was obtained could have gone into a careful examination of the grounds for a new trial.

Examples are numerous here where convictions have been wrested from juries by popular excitement; but I need not weary you with their recital.

I submit, gentlemen, these suggestions, hastily put together, for your consideration. If they commend themselves to your approval, I shall feel amply compensated for the slight trouble of placing them before you.

THE LAW OF RAPE.*

BY JACOB F. MILLER, ESQ.

RAPE, from *raptus mulierum*, signifies the carnal knowledge of a woman, forcibly and against her will. This crime has justly been regarded of an aggravated nature, and been visited with severe punishment. By the Jewish law it was punished with death in case the damsel was betrothed to another man; if she was not so betrothed, then a heavy fine of fifty shekels was to be paid to her father, and she was to be the wife of the ravisher all the days of his life, without the power of divorce. "Because he hath humbled her he may not put her away all his days."

The Roman law punished the crime of rape with death and confiscation of goods. Stealing away a woman from her parents or guardians, and debauching her, was equally penal whether she consented or was forced. The Roman law entertained such an exalted idea of the sex, that it never supposed a woman to go astray without the arts and seductions of the other sex, and therefore by punishing so severely the solicitations of the men, it thought to secure the honor and chastity of the women.

The English law, with less gallantry, but with more justice and good sense, refused to punish one of the transgressors for what might have been a mutual fault, and hence made it an essential element in the crime of rape that it must be against the woman's will.

* Read at meeting of October 8, 1868. This paper was prepared by the request of many physicians who were members of the Society, and is worthy of note as being the first paper read before the Society by a lawyer and the first active part which any lawyer took in its proceedings.



Jacob L. Miller



Rape was punished by the Saxon laws with death. This was afterwards thought too severe, and in the time of William the Conqueror, the penalty was changed to castration and loss of the eyes. In the Third Edward I, the punishment was much mitigated, and the crime was regarded simply as a trespass, if not prosecuted by appeal within forty days, and subjecting the offender to two years' imprisonment, and a fine at the king's will. In the Thirteenth Edward I, the commission of this crime was made a felony, it being found that this lenity produced such disastrous consequences.

Three things are necessary to constitute the crime of rape : 1. There must be carnal knowledge ; 2. It must be done forcibly ; 3. It must be done without the woman's consent.

By the common law, to constitute carnal knowledge there must be not only penetration of the body of the female, but also emission of seed. But offenders so frequently escaped punishment on account of the difficulty of proving the emission of seed, that it was enacted in the ninth year of the reign of George IV., that the carnal knowledge should be deemed complete on proof of penetration only ; and any penetration, even the slightest, should be deemed sufficient, even though not of such depth as to rupture the hymen. And even though the jury negative the emission, or the circumstances proved to have been such that no emission did or could take place, carnal knowledge is complete on proof of penetration.

The amount of force required depends upon the circumstances of the case. It is not necessary that the female should put forth all the strength of which she might be capable on other occasions, as her fears may be aroused, she may think that her life is endangered, injury may be threatened, and so, through fear, she may be easily overcome.

The act must be committed against the woman's consent. Children under ten years of age cannot legally consent, as they are incapable of judgment and discretion. In an English case (*Russ & Ry. C.C. 489*) it was held that if a woman be beguiled into her consent by artful means, it will not be

rape ; and having carnal knowledge of a married woman, under circumstances which induced her to believe it was her husband, was held by a majority of judges not to be a rape. In this case, the woman supposed her husband to be in bed with her, having fallen asleep with him in bed. She discovered by the breathing of the prisoner that it was not her husband, and immediately threw him from her. She then went and hanged herself, and was saved from death by the skill of her surgeon. It is difficult to see how her conduct can be tortured into consent. Fraud vitiates everything in which it enters. It may form the basis of a claim against the perpetrator of it, but never in his favor. Moreover, had the woman known the prisoner was there instead of her husband, he would not have accomplished his purpose. He should not be allowed to take advantage of his own wrong. Several of the judges intimated, however, that if such a case again occurred, they would direct the jury to find a special verdict, with the view, no doubt, of examining the law more carefully.

The crime is not mitigated by showing that the woman at last yielded to violence, if she consented through duress or violence, or threats of murder ; nor will any subsequent acquiescence on her part remove the guilt of the ravisher. Nor is it a defence to show that the female was taken at first with her own consent, if she was afterwards forced against her will, as she has a right at any time to withhold her consent.

The Roman law seems to have supposed that a prostitute could not be capable of injuries of this character. The reason was that, as she had no regard for her chastity, there was no crime in violating it. The common law, however, does not allow the forcing of a prostitute. It admits the possibility of her reformation, and gives her the power to withhold her consent. She has a right to her person and her liberty so long as she does not interfere with the rights of others.

Formerly it was held not to be rape for a man to have forc-

ble connection with his concubine. This is so no longer. A man cannot be guilty of rape on his wife, for the matrimonial consent cannot be withdrawn so as to make the act criminal; but he may be indicted and punished as an abettor. All who are present, of both sexes, aiding and abetting in the perpetration of the crime, are principals in the second degree. When several persons are engaged, though some of them only really commit the act, in the eye of the law they have all participated, and all are guilty.

On a trial for rape, the prosecutrix is a competent witness. In the case of a child of tender years, her whole story which she has previously told should be received, in order to test the accuracy of her recollection. The fact that a female made a complaint shortly after the crime was committed can be proved; but not the particulars of the statement. Indeed it is important to inquire respecting the time which elapsed before she made her complaint, the state of her dress, the marks of violence upon her person, whether she called for assistance, if there was a probability that any one was near enough to render it. But delay to make her complaint will not prejudice her cause if she was under the control of the ravisher, or afraid of him.

As the charge of rape is easily made and hard to defend, and the prosecutrix is the main and frequently the only witness, the law allows her character and chastity to be impeached. She may be asked whether she has not had previous connection with the prisoner or with other men, and in this case she is not privileged from answering. Generally witnesses are excused from answering questions when the answers would degrade them, but the necessities of the case here form the ground of the exception. She may be shown to be a common prostitute. For while a rape may be committed upon a prostitute as well as upon a virgin, yet the proof is quite different. It is easy to believe that a woman having frequently submitted to the lewd embraces of another, will readily repeat the act. There is a wide difference between "a tenant of the stew," and the chaste female

who instinctively shudders at the mere thought of pollution. It is much easier to continue a course of vice, than to commence it.

The character of the female, and the circumstances under which the act was committed, are important, as bearing upon the question of consent.

The punishment for having carnal knowledge of a child under ten years of age, or a female over that age, if forced, is imprisonment in the State prison for a term of not less than ten years. The having carnal knowledge of a woman above ten years of age, without her consent, by administering any substance or liquid producing stupor or imbecility of mind or weakness of body, so as to prevent effectual resistance, is punished by imprisonment for a term not exceeding five years. This crime is justly regarded as heinous, and deserving of severe punishment.

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